

# **APPENDIX A**

## **APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

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## ACRONYMS/ABBREVIATIONS

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AR	Administrative Record
ARAR	applicable or relevant and appropriate requirement
Cal. Civ. Code	<i>California Civil Code</i>
Cal. Code Regs.	<i>California Code of Regulations</i>
Cal/EPA	California Environmental Protection Agency
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
C.F.R.	<i>Code of Federal Regulations</i>
COC	Chemical of Concern
COEC	Chemical of Ecological Concern
DON	Department of the Navy
DTSC	(Cal/EPA) Department of Toxic Substances Control
Fed. Reg.	<i>Federal Register</i>
FR	<i>Federal Register</i>
FS	feasibility study
HQ	Hazard Concern
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPDES	National Pollution Discharge Elimination System
OE	ordnance or explosive
OSWER	Office of Solid Waste and Emergency Response
PCB	polychlorinated biphenyl
RAP	remedial action plan
RCRA	Resource Conservation and Recovery Act
RD	remedial design
Res.	Resolution
RI	remedial investigation
ROD	record of decision
RWQCB	(California) Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
TBC	to be considered
TCLP	toxicity characteristic leaching procedure
tit.	title
U.S.C.	<i>United States Code</i>

# APPENDIX A

## 1. INTRODUCTION

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This appendix identifies and evaluates potential federal and state of California applicable or relevant and appropriate requirements (ARARs) from the universe of regulations, requirements, and guidance and sets forth the Department of the Navy (DON) determinations regarding those potential ARARs for each response action alternative retained for detailed analysis in this feasibility study (FS) report

This evaluation includes an initial determination of whether the potential ARARs actually qualify as ARARs, and a comparison for stringency between the federal and state regulations to identify the controlling ARARs. The identification of ARARs is an iterative process. The final determination of ARARs will be made by the DON in the record of decision (ROD), after public review, as part of the response action selection process.

### 1.1 SUMMARY OF CERCLA AND NCP REQUIREMENTS

Section 121(d) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, 42 *United States Code* [U.S.C.] Section [§] 9621[d]), as amended, states that remedial actions on CERCLA sites must attain (or the decision document must justify the waiver of) any federal or more stringent state environmental standards, requirements, criteria, or limitations that are determined to be legally applicable or relevant and appropriate.

Applicable requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address the situation at a CERCLA site. The requirement is applicable if the jurisdictional prerequisites of the standard show a direct correspondence when objectively compared to the conditions at the site. An applicable federal requirement is an ARAR. An applicable state requirement is an ARAR only if it is more stringent than federal ARARs.

If the requirement is not legally applicable, then the requirement is evaluated to determine whether it is relevant and appropriate. Relevant and appropriate requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, while not applicable, address

problems or situations similar to the circumstances of the proposed response action and are well suited to the conditions of the site (U.S. EPA 1988a). A requirement must be determined to be both relevant and appropriate in order to be considered an ARAR.

The criteria for determining relevance and appropriateness are listed in 40 C.F.R. § 300.400(g)(2) and include the following:

- the purpose of the requirement and the purpose of the CERCLA action;
- the medium regulated or affected by the requirement and the medium contaminated or affected at the CERCLA site;
- the substances regulated by the requirement and the substances found at the CERCLA site;
- the actions or activities regulated by the requirement and the response action contemplated at the CERCLA site;
- any variances, waivers, or exemptions of the requirement and their availability for the circumstances at the CERCLA site;
- the type of place regulated and the type of place affected by the release or CERCLA action;
- the type and size of structure or facility regulated and the type and size of structure or facility affected by the release or contemplated by the CERCLA action; and
- any consideration of use or potential use of affected resources in the requirement and the use or potential use of the affected resources at the CERCLA site.

According to CERCLA ARARs guidance (U.S. EPA 1988a), a requirement may be “applicable” or “relevant and appropriate,” but not both. Identification of ARARs must be done on a site-specific basis and involve a two-part analysis: first, a determination whether a given requirement is applicable; then, if it is not applicable, a determination whether it is nevertheless both relevant and appropriate. It is important to explain that some regulations may be applicable or, if not applicable, may still be relevant and appropriate. When the analysis determines that a requirement is both relevant and appropriate, such a requirement must be complied with to the same degree as if it were applicable (U.S. EPA 1988a).

Tables included in this appendix present each potential ARAR with an initial determination of ARAR status (i.e., applicable, relevant and appropriate, or not an ARAR). For the determination of relevance and appropriateness, the pertinent criteria were examined to determine whether the

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requirements addressed problems or situations sufficiently similar to the circumstances of the release or response action contemplated, and whether the requirement was well suited to the site. A negative determination of relevance and appropriateness indicates that the requirement did not meet the pertinent criteria. Negative determinations are documented in the tables of this appendix and are discussed in the text only for specific cases.

To qualify as a state ARAR under CERCLA and the NCP, a state requirement must be:

- a state law or regulation,
- an environmental or facility siting law or regulation,
- promulgated (of general applicability and legally enforceable),
- substantive (not procedural or administrative),
- more stringent than federal requirements,
- identified in a timely manner, and
- consistently applied.

To constitute an ARAR, a requirement must be substantive. Therefore, only the substantive provisions of requirements identified as ARARs in this analysis are considered to be ARARs. Permits are considered to be procedural or administrative requirements. Provisions of generally relevant federal and state statutes and regulations that were determined to be procedural or nonenvironmental, including permit requirements, are not considered to be ARARs. CERCLA Section 121(e)(1), 42 U.S.C. § 9621(e)(1), states that “No Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely on-site, where such remedial action is selected and carried out in compliance with this section.” The term *on-site* is defined for purposes of this ARARs discussion as “the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action” (40 C.F.R. § 300.5).

Nonpromulgated advisories or guidance issued by federal or state governments are not legally binding and do not have the status of ARARs. Such requirements may, however, be useful, and are “to be considered” (TBC). TBC (40 C.F.R. § 300.400[g][3]) requirements complement ARARs but do not override them. They are useful for guiding decisions regarding cleanup levels or methodologies when regulatory standards are not available.

Pursuant to U.S. EPA guidance (U.S. EPA 1988a), ARARs are generally divided into three categories: chemical-specific, location-specific, and action-specific requirements. This classification was developed to aid in the identification of ARARs; some ARARs do not fall precisely into one group or another. ARARs are identified on a site basis for remedial actions where CERCLA authority is the basis for cleanup.

As the lead federal agency, the DON has primary responsibility for identifying federal ARARs at Area H1 on Mare Island. Potential federal ARARs that have been identified for Area H1 are discussed in Section A1.2.2. Pursuant to the definition of the term *on-site* in 40 C.F.R. § 300.5, the on-station areas that are part of this action. The Investigation Area H1 boundary is considered the on-site boundary. The site has been divided into three areas including the Containment Area inside the existing groundwater Containment Barrier, the Upland Areas outside the Containment Barrier, and the Non-Tidal Wetland Areas outside the Containment Barrier. The Containment Area includes a RCRA permitted interim status landfill and former Industrial Waste Treatment Plant (IWTP) in addition to a facility landfill and oil sumps and other sub areas. Soil and sediment contamination are present at the site; groundwater is currently being collected from an extraction trench inside the containment area and discharged to the local Publicly Owned Treatment Works (POTW). Proposed response actions include consolidation of contaminated soils and sediments from the Upland and Non-Tidal Wetland areas in the Containment Area. One alternative for the Containment Area includes off-site disposal. The Containment Area extraction trench and sumps and conveyance systems connecting those items are defined as “on-site.” Discharge of collected groundwater to the local POTW and any additional treatment, blending, and distribution performed by the treatment works are considered to be off-site actions. Regulatory requirements that apply to off-site actions are not ARARs. Off-site actions (i.e., off-site disposal) are required to comply with applicable requirements only and are not required to comply with relevant and appropriate requirements identified as ARARs for on-site actions.

Identification of potential state ARARs was initiated through DON requests that the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) identify potential state ARARs, an action described in more detail in Section A1.2.3. A list of State ARAR’s was received in November 2005.



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## 1.2 METHODOLOGY DESCRIPTION

The process of identifying and evaluating potential federal and state ARARs is described in this subsection.

### 1.2.1 General

As the lead federal agency, the DON has primary responsibility for identification of potential ARARs for *IA H1*. In preparing this ARARs analysis, the DON undertook the following measures, consistent with CERCLA and the NCP:

- identified federal ARARs for each response action alternative addressed in the FS taking into account site-specific information for *IA H1*;
- reviewed potential state ARARs to determine whether they satisfy CERCLA and NCP criteria that must be met in order to constitute state ARARs;
- evaluated and compared federal ARARs and their state counterparts to determine whether state ARARs are more stringent than the federal ARARs or are in addition to the federally required actions; and
- reached a conclusion as to which federal and state ARARs are the most stringent and/or “controlling” ARARs for each alternative.

As outlined in Section 3.2 of this FS report, the remedial action objective for *IA H1* are:

#### Containment Area

The primary exposure pathways for landfill refuse and contaminated media are dermal contact, ingestion, and inhalation of compounds. The groundwater at *IA H1* is not suitable for human consumption due to high levels of dissolved solids and low production rates. The landfill is therefore not a threat to drinking water, however migration of the contaminated groundwater may have an adverse ecological effect on target receptors due to exposure through ingestion, inhalation or dermal contact. Therefore the remedial action objectives for the containment area are:

- protect human and ecological receptors from exposure to landfill contamination by eliminating exposure pathways and contaminant migration;
- minimize the effects of landfill contaminants on groundwater quality (i.e. infiltration) and eliminate migration of contaminated groundwater to potential off-site receptors;
- protect human and ecological receptors by minimizing exposure pathways to landfill gas and migration.

## **Upland Areas**

A risk assessment has been completed for the upland area of the H1 area and chemicals of concern have been identified. The main pathways for contaminants in the Upland Area for humans are inhalation, direct contact, and ingestion of site soil. Potential pathways also exist for some ecological receptors as well as a concern of potential contaminant migration (physical movement, runoff) for some contaminants to adjoining non-tidal wetlands. Therefore the RAOs for the Upland Areas are:

- Reduce exposure via ingestion, direct contact, and inhalation of site soil containing Contaminants of Concern COC concentrations that present an area-wide cancer risk estimate of  $1 \times 10^{-5}$  or noncarcinogenic adverse health effects resulting in an HI of 1.
- Reduce exposure to Contaminants of Ecological Concern COECs present within the soil posing immediate and significant or potential risk to the gray fox, the northern harrier, the western meadowlark, ornate shrew, and California vole.
- Reduce downward migration of soil COCs to the SWBZ underlying IA H1.
- Reduce migration of COCs present within surface soil in IA H1 toward the sediment and surface water of the Non-Tidal Wetland Areas of IA H1.
- Control direct exposure and protect future workers from the extremely low residual risk posed by potential ordinance and explosives (OE) and radiological material in IA H1.

## **Non-Tidal Wetland Areas**

- Reduce exposure via ingestion, direct contact, and inhalation of site soil containing COC concentrations that present an area-wide cancer risk estimate of  $1 \times 10^{-5}$  or noncarcinogenic adverse health effects resulting in an HI of 1.
- Reduce exposure to COECs present within the sediment posing immediate and significant or potential risk to the killdeer, great blue heron, the mallard, and the salt marsh harvest mouse.
- Reduce exposure via ingestion of surface water containing COC concentrations presenting an area-wide cancer risk estimate of  $1 \times 10^{-5}$  to humans at the Non-Tidal Wetland Areas.
- Control direct exposure and protect future workers from the extremely low residual risk posed by potential MEC and radiological material in IA H1.

Remedial action alternatives retained for detailed analysis in this FS are designed to accomplish these remedial action objectives. The remedial action alternatives considered for detailed analysis, and for which an ARARs analysis is presented in this appendix, are as follows:

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## **Containment Area**

### **Alternative 1—No Action**

- Alternative 2A—Multilayer Cap, Institutional Controls, Groundwater Containment, and Landfill Gas Monitoring
- Alternative 2B—RCRA Cap, Institutional Controls, Groundwater Containment, and Landfill Gas Monitoring
- Alternative 3—Removal and Disposal

## **Upland Areas Outside the Containment Barrier**

- Alternative 1—No Action
- Alternative 2—Institutional Controls, Hot Spot Removal (Hazardous Quotient [HQ]=10, Groundwater Monitoring, and 2-Foot Soil Cover
- Alternative 3—Institutional Controls, Hot Spot Removal (HQ=5), Groundwater Monitoring, and 2-Foot Soil Cover
- Alternative 4—Institutional Controls, Hot Spot Removal (HQ=3), Groundwater Monitoring, and 2-Foot Soil Cover
- Alternative 5—Debris Excavation and Groundwater Monitoring

## **Non-Tidal Wetland Areas Outside the Containment Barrier**

- Alternative 1—No Action
- Alternative 2—Institutional Controls, Hot Spot Removal (HQ=10), and Sediment Monitoring
- Alternative 3—Institutional Controls, Hot Spot Removal (HQ=5), and Sediment Monitoring
- Alternative 4—Institutional Controls, Hot Spot Removal (HQ=3), and Sediment Monitoring
- Alternative 5—Institutional Controls, Hot Spot Removal (HQ=1), and Sediment Monitoring

### **1.2.2 Identifying and Evaluating Federal ARARs**

The DON is responsible for identifying federal ARARs as the lead federal agency under CERCLA and the NCP. The final determination of federal ARARs will be made when the DON issues the ROD. The federal government implements a number of federal environmental statutes that are the source of potential federal ARARs, either in the form of the statutes or regulations

promulgated thereunder. Examples include the Resource Conservation and Recovery Act (RCRA), the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act, and their implementing regulations, to name a few. See NCP preamble at 55 *Federal Register* (Fed. Reg.) 8764–8765 (1990) for a more complete listing.

The proposed response action and alternatives were reviewed against all potential federal ARARs, including but not limited to those set forth at 55 Fed. Reg. 8764–8765 (1990), in order to determine if they were applicable or relevant and appropriate utilizing the CERCLA and NCP criteria and procedures for ARARs identification by lead federal agencies.

### **1.2.3 Identifying and Evaluating State ARARs**

The process of identifying and evaluating potential state ARARs by the state and the DON is described in this subsection.

#### **1.2.3.1 SOLICITATION OF STATE ARARs UNDER NCP**

U.S. EPA guidance (U.S. EPA 1988b) recommends that the lead federal agency consult with the state when identifying state ARARs for remedial actions. In essence, the CERCLA/NCP requirements at 40 C.F.R. § 300.515 for remedial actions provide that the lead federal agency request that the state identify chemical- and location-specific state ARARs upon completion of site characterization. The requirements also provide that the lead federal agency request identification of all categories of state ARARs (chemical-, location-, and action-specific) upon completion of identification of remedial alternatives for detailed analysis. The state must respond within 30 days of receipt of the lead federal agency requests. The remainder of this subsection documents the DON's efforts to date to identify and evaluate state ARARs.

The DON followed the procedures of the process set forth in 40 C.F.R. § 300.515 for remedial actions in seeking state assistance in identifying state ARARs.

#### **1.2.4 CHRONOLOGY OF EFFORTS TO IDENTIFY STATE ARARs**

The following chronology summarizes the DON efforts to obtain state assistance in identifying state ARARs for the response action at IA H1. Key correspondence between the DON and the state agencies relating to this effort has been included in the Administrative Record (AR) for this FS.

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The DON formally requested state chemical-, location-, and action-specific ARARs for IA H1 on 15, October 2004. Letters were sent to the DTSC and Regional Water Quality Control Board (RWQCB) soliciting ARARs.

- A written response to this request was received from the DTSC listing State ARARs in November 2005.

### **1.2.5      ARAR Categories**

In general, there are three categories of ARARs:

- Ambient or chemical-specific requirements
- Location-specific requirements
- Performance, design, or other action-specific requirements

Chemical-specific ARARs are usually health- or risk-based numerical values or methodologies that, when applied to site-specific conditions, result in the establishment of numerical values. These values establish the acceptable amount or concentration of a chemical that may be found in or discharged to the ambient environment. If a chemical has more than one such requirement that is an ARAR, compliance should be based on the most stringent of these requirements.

A site's location is a fundamental determinant of its impact on human health and the environment. Location-specific ARARs are restrictions placed on the concentration of hazardous substances or the conduct of activities solely because they are in specific locations. Some examples of special locations include floodplains, wetlands, historic places, and sensitive ecosystems or habitats.

Action-specific ARARs are usually technology- or activity-based requirements or limitations on actions taken with respect to hazardous wastes. These requirements are triggered by the particular remedial activities that are selected to accomplish a remedy. Since there are usually several alternative actions for any remedial site, very different requirements can come into play. These action-specific requirements do not in themselves determine the remedial alternative; rather, they indicate how a selected alternative must be achieved.

Development of a preliminary list of potential chemical-specific ARARs allows the establishment of a list of preliminary remediation goals (PRGs) in the FS process. PRGs are essentially a tentative listing of contaminants together with initially anticipated cleanup concentrations or risk-based levels for each medium. RGs serve to focus the development of alternatives on remedial technologies that can achieve the remediation goals thereby limiting the number of alternatives to be considered in the detailed remedial alternative analysis conducted later in the FS process.

At the beginning of the FS process, a preliminary consideration of location- and action-specific ARARs is commonly conducted. As remedial alternatives are screened during the FS, action-specific ARARs are identified. When the detailed analysis of the remedial alternatives is conducted, all action-specific ARARs are refined to a much more detailed form with respect to each alternative before a comparison of alternatives begins. These final ARARs (with some modification based on background levels) in conjunction with the risk-based concentrations will be used to establish media-specific cleanup objectives for the IA H1. The chemical-specific, location-specific, and action-specific ARARs for IA H1 are discussed in the following subsections.

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### **Chemical-Specific ARARS**

Health-based, chemical-specific ARARs pertinent to identified contaminants of concern are presented here. The chemical-specific ARARs are primarily derived from federal and state health and environmental statutes and regulations. As discussed below, in some instances these standards are classified as items "to be considered." A summary of potential chemical-specific ARARs for the contaminants at IA H1 is presented in Tables A-1 and A-2. Table A-1 presents the potential chemical-specific, Federal ARARs that are applicable to IA H1. Similarly, Table A-2 presents the potential chemical-specific, California ARARs.

### **Location-Specific ARARS**

Location-specific ARARs are statutes or regulations that set restrictions on activities or limits on contaminant levels solely because of location, e.g., within a floodplain, wetland, historic place, or sensitive ecosystem or habitat. The potential location-specific ARARs are presented in Tables A-3 and A-4. Table A-3 presents potential Federal ARARs and Table A-4 presents potential California ARARs.

### **Action-Specific ARARS**

Performance, design, and other action-specific requirements set controls or restrictions on particular kinds of activities related to the management of hazardous substances or pollutants. The specific chemicals present at a site do not trigger these requirements but rather by site characterization activities and remedial actions. The selection of appropriate action-specific ARARs is based on the general response actions. The general response actions are as follows:

- **No action**—provides a baseline for comparison with other alternatives and is required by the NCP for the FS process.
- **Institutional controls**—prevent human exposure to the identified contaminants of concern (COCs) but do not address reducing the toxicity, mobility, or volume of contamination.
- **Containment**—limits or controls the migration of contaminants beyond the present area of contamination into adjacent areas but does not contribute to reducing the toxicity or volume of contamination.
- **Collection**—removes contaminated media to facilitate treatment or disposal actions.
- **Treatment**—uses processes, implemented *in situ*, on-site, or off-site, in order to reduce the toxicity, mobility, or volume of contaminants in the affected media.
- **Disposal** (in association with the collection or treatment actions)—determines the ultimate location of treated or untreated media in an environmentally sound, publicly acceptable, and cost-effective manner.

The potential action-specific ARARs based on the general response actions described above are presented in Tables A-5 and A-6. Table A-5 presents potential federal ARARs, and Table A-6 presents potential California ARARs.

### 1.2.6 APPLICABILITY OF ARARS TO THE FINAL REMEDY

CERCLA §121 specifically requires attainment of all ARARs. Moreover, as explained in the preamble to the NCP (55 FR 8741), in order to attain all ARARs a remedial action must comply with the most stringent requirement thus ensuring attainment of all other ARARs. Furthermore, CERCLA requires that the remedies selected must attain ARARs and be protective of human health and the environment. Consequently, PRGs based on ARARs require modification based on information and data collected in the RI, including the baseline risk assessment, or when ARARs are not available or are determined to be inadequate for protection of human health and the environment.



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Development of remediation goals is actually a portion of the overall development of remedial action objectives, which ultimately will define the required endpoint of the selected remedial action. As stated in the preamble to the NCP (55 FR 8712-8713), "remedial action objectives are the more general description of what the remedial action will accomplish. Remediation goals are a subset of remedial action objectives and consist of medium-specific or operable unit-specific chemical concentrations that are protective of human health and the environment and serve as goals for the remedial action. The remedial action objectives should specify: (1) the contaminants of concern, (2) the exposure routes and receptors, and (3) an acceptable contaminant level or range of levels for each exposure medium (i.e., a preliminary remediation goal)." Remediation goals will establish acceptable exposure levels, per 40 CFR 300.430 (e)(2)(i), that are protective of human health and the environment and will be developed by considering the following:

- ARARs (chemical-specific)
- Acceptable exposure levels for systemic toxicants
- Acceptable exposure levels for known or suspected carcinogens ( $10^{-6}$  to  $10^{-4}$  risk levels)
- Technical limitations (e.g., detection limits)
- Uncertainty factors
- Other pertinent information
- Environmental evaluations shall be performed to assess the threat to the environment, especially sensitive habitats and critical habitat of species protected under the Endangered Species Act.

Once a preferred remedial action alternative is formally selected, all chemical-, location-, and action-specific ARARs are identified. If it is found that the most suitable remedial alternative does not meet an ARAR, the NCP provides for waivers of ARARs under certain circumstances. According to 40 CFR 300.430(f)(1)(ii)(C),

**"An alternative that does not meet an ARAR under federal environmental or state environmental or facility siting laws may be selected under the following circumstances:**

- “The alternative is an interim measure and will become part of a total remedial action that will attain the applicable or relevant and appropriate federal or state requirement;
- “Compliance with the requirement will result in greater risk to human health and the environment than other alternatives;
- “Compliance with the requirement is technically impracticable from an engineering perspective;
- “The alternative will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement, or limitation through use of another method or approach;
- “With respect to a state requirement, the state has not consistently applied, or demonstrated the intention to consistently apply, the promulgated requirement in similar circumstances at other remedial actions within the state; or
- “For Fund-financed response actions only, an alternative that attains the ARAR will not provide a balance between the need for protection of human health and the environment at the site and the availability of Fund monies to respond to other sites may present a threat to human health and the environment.”

Accordingly, if any of the alternatives selected for IA H1 are expected to not attain an ARAR, this expectation must be expressed together with an appropriate justification that relates to at least one of the ARAR waiver circumstances identified above.

From this point, the alternative will become the final remedy as it is incorporated into the Remedial Action Plan (RAP). Once the final RAP has been signed, requirements must be modified only when they are determined to be applicable or relevant and appropriate and necessary to ensure that the remedy is protective of human health and the environment [40 CFR 300.430(f)(1)].

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## **A1.3 OTHER GENERAL ISSUES**

General issues identified during the evaluation of ARARs for IA H1 are discussed in the following subsections.

### **A1.3.1 General Approach to Requirements of the Federal Resource Conservation and Recovery Act**

The RCRA is a federal statute passed in 1976 to meet four goals: the protection of human health and the environment, the reduction of waste, the conservation of energy and natural resources, and the elimination of the generation of hazardous waste as expeditiously as possible. The Hazardous and Solid Waste Amendments (HSWA) of 1984 significantly expanded the scope of RCRA by adding new corrective action requirements, land disposal restrictions, and technical requirements. RCRA, as amended, contains several provisions that are potential ARARs for CERCLA sites.

Substantive RCRA requirements are applicable to response actions on CERCLA sites if the waste is a RCRA hazardous waste, and either:

- the waste was initially treated, stored, or disposed after the effective date of the particular RCRA requirement; or
- the activity at the CERCLA site constitutes treatment, storage, or disposal, as defined by RCRA (U.S. EPA 1988a).

The preamble to the NCP indicates that state regulations that are components of a federally authorized or delegated state program are generally considered federal requirements and potential federal ARARs for the purposes of ARARs analysis (55 Fed. Reg. 8666, 8742 [1990]). The state of California received approval for its base RCRA hazardous waste management program on 23 July 1992 (57 Fed. Reg. 32726 [1992]). The state of California “Environmental Health Standards for the Management of Hazardous Waste,” set forth in Title 22 *California Code of Regulations*, Division 4.5 (Cal. Code Regs. tit. 22, div. 4.5), were approved by U.S. EPA as a component of the federally authorized state of California RCRA program. On 26 September

2001, California received final authorization of its revised State Hazardous Waste Management Program by the U.S. EPA (63 Fed. Reg. 49118 [2001]).

The regulations of Cal. Code Regs. tit. 22, div. 4.5 are, therefore, a source of potential federal ARARs for CERCLA response actions. The exception is when a state regulation is “broader in scope” than the corresponding federal RCRA regulations. In that case, such regulations are not considered part of the federally authorized program or potential federal ARARs. Instead, they are purely state law requirements and potential state ARARs.

The U.S. EPA 23 July 1992 notice approving the state of California RCRA program (57 Fed. Reg. 32726 [1992]) specifically indicated that the state regulations addressed certain non-RCRA, state-regulated hazardous wastes that fell outside the scope of federal RCRA requirements. Cal. Code Regs. tit. 22, div. 4.5 requirements would be potential state ARARs for such non-RCRA, state-regulated wastes.

A key threshold question for the ARARs analysis is whether or not the contaminants at IA H1 constitute federal hazardous waste as defined under RCRA and the state’s authorized program or qualify as non-RCRA, state-regulated hazardous waste. A discussion of waste characterization is included in Section A1.4.

### **A1.3.2 California Environmental Quality Act**

The California Environmental Quality Act (CEQA) is applicable to state discretionary decision-making but not to actions of the federal government. Furthermore, U.S. EPA and the DON have determined that the requirements of the CEQA are no more stringent than the requirements for environmental review under CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA). Pursuant to the provisions of CERCLA, the NCP, and other federal environmental impact evaluation requirements, selecting a remedial action with feasible mitigation measures and provision for public review is designed to assure that the proposed action provides for short- and long-term protection of the environment and public health. Hence, CERCLA performs the same function as, and is functionally equivalent to, the state’s requirements under CEQA.

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For the reasons set forth above, CEQA is not an ARAR for CERCLA actions. However, the DTSC has determined that as the regulatory lead agency their action of signing the ROD is a CEQA action and therefore applies to this site.

## **A1.4 WASTE CHARACTERIZATION**

Selection of ARARs involves the characterization of wastes as described below.

### **A1.4.1 RCRA Hazardous Waste Determination**

Federal RCRA hazardous waste determination is necessary to determine whether a waste is subject to RCRA requirements at Cal. Code Regs. tit. 22, div. 4.5 and other state requirements at Cal. Code Regs. tit. 23, div. 3, Chapter (ch.) 15. The first step in the RCRA hazardous waste characterization process is to evaluate contaminated media at the site(s) and determine whether the contaminant constitutes a “listed” RCRA waste. The preamble to the NCP states that “it is often necessary to know the origin of the waste to determine whether it is a listed waste and that, if such documentation is lacking, the lead agency may assume it is not a listed waste” (55 Fed. Reg. 8666, 8758 [1990]).

This approach is confirmed in U.S. EPA guidance for CERCLA compliance with other laws (U.S. EPA 1988a), as follows:

“To determine whether a waste is a listed waste under RCRA, it is often necessary to know the source. However, at many Superfund sites, no information exists on the source of wastes. The lead agency should use available site information, manifests, storage records, and vouchers in an effort to ascertain the nature of these contaminants. When this documentation is not available, the lead agency may assume that the wastes are not listed RCRA hazardous wastes, unless further analysis or information becomes available that allows the lead agency to determine that the wastes are listed RCRA hazardous wastes.”

RCRA hazardous wastes that have been assigned U.S. EPA hazardous waste numbers (or codes) are listed in Cal. Code Regs. tit. 22, §§ 66261.30–66261.33. The lists include hazardous waste codes beginning with the letters “F,” “K,” “P,” and “U.”

Knowledge of the exact source of a waste is required for source-specific listed wastes (“K” waste codes). Some knowledge of the nature or source of the waste is required even for listed wastes from nonspecific sources, such as spent solvents (“F” waste codes) or commercial chemical products (“P” and “U” waste codes). These listed RCRA hazardous wastes are restricted to commercially pure chemicals used in particular processes such as degreasing.

P and U wastes cover only unused and unmixed commercial chemical products, particularly spilled or off-spec products (U.S. EPA 1991a). Not every waste containing a P or U chemical is a hazardous waste. To determine whether a CERCLA investigation-derived waste contains a P or U waste, there must be direct evidence of product use. In particular, all the following criteria must be met. The chemicals must be:

- discarded (as described in 40 CFR § 261.2[a][2]),
- either off-spec commercial products or a commercially sold grade,
- not used (soil contaminated with spilled unused wastes is a P or U waste), and
- the sole active ingredient in a formulation.

A RCRA Interim Status permitted landfill “RCRA Landfill” was prohibited from accepting hazardous wastes with the exception of asbestos-containing materials, solvent-laden rags, paint sludge, and spent sandblast abrasives. Hazardous wastes prohibited from the RCRA Landfill were disposed of off site. The RCRA/Facility Landfill was closed in 1989. Previously wastes were disposed of in the facility landfill was used to dispose of shipyard wastes that is assumed to consist primarily of shipyard construction debris and municipal wastes. Spent sandblast abrasives; waste paints; solvents; acids; caustics; plating bath wastes; mercury wastes; forklift and submarine batteries; waste oil; sludge; grease; polychlorinated biphenyl (PCB)-contaminated fluids and clothing; pesticide containers; scrap metal and wood; infectious wastes from the dispensary; radium-containing equipment; and asbestos were suspected to be among the waste disposed of.

The second step in the RCRA hazardous waste characterization process is to evaluate potential hazardous characteristics of the waste. The evaluation of characteristic waste is described in U.S. EPA guidance as follows (U.S. EPA 1988a):

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Under certain circumstances, although no historical information exists about the waste, it may be possible to identify the waste as RCRA characteristic waste. This is important in the event that (1) remedial alternatives under consideration at the site involve on-site treatment, storage, or disposal, in which case RCRA may be triggered as discussed in this section; or (2) a remedial alternative involves off-site shipment. Since the generator (in this case, the agency or responsible party conducting the Superfund action) is responsible for determining whether the wastes exhibit any of these characteristics (defined in 40 C.F.R. §§ 261.21–261.24), testing may be required. The lead agency must use best professional judgment to determine, on a site-specific basis, if testing for hazardous characteristics is necessary.

In determining whether to test for the toxicity characteristic using the extraction procedures (EP) toxicity test, it may be possible to assume that certain low concentrations of waste are not toxic. For example, if the total waste concentration in soil is 20 times or less the EP toxicity concentration, the waste cannot be characteristic hazardous waste. In such a case, RCRA requirements would not be applicable. In other instances, where it appears that the substances may be characteristic hazardous waste (ignitable, corrosive, reactive, or EP toxic), testing should be performed.

Hazardous waste characteristics, as defined in 40 C.F.R. §§ 261.21–261.24, are commonly referred to as ignitability, corrosivity, reactivity, and toxicity. California environmental health standards for the management of hazardous waste set forth in Cal. Code Regs. tit. 22, div. 4.5 were approved by U.S. EPA as a component of the federally authorized California RCRA program. Therefore, the characterization of RCRA waste is based on the state requirements.

The characteristics of ignitability, corrosivity, reactivity, and toxicity are defined in Cal. Code Regs. tit. 22, §§ 66261.21–66261.24. According to Cal. Code Regs. tit. 22, § 66261.24(a)(1)(A), “A waste that exhibits the characteristic of toxicity pursuant to subsection (a)(1) of this section has the EPA Hazardous Waste Number specified in Table I of this section which corresponds to the toxic contaminant causing it to be hazardous.” Table I assigns hazardous waste codes beginning with the letter “D” to wastes that exhibit the characteristic of toxicity; D waste codes are limited to “characteristic” hazardous wastes.

According to Cal. Code Regs. tit. 22, § 66261.10, waste characteristics can be measured by an available standardized test method or be reasonably classified by generators of waste based on their knowledge of the waste provided that the waste has already been reliably tested or if there is documentation of chemicals used. Wastes disposed of in the facility and RCRA landfills are considered to contain hazardous wastes. If the off-site disposal alternative is selected for the containment area further testing and characterization of wastes being disposed of off-site will be completed as materials are excavated.

The requirements at Cal. Code Regs. tit. 22, § 66261.24 list the toxic contaminant concentrations that determine the characteristic of toxicity. The concentration limits are in milligrams per liter (mg/L). These units are directly comparable to total concentrations in waste groundwater and surface water. For waste soils, these concentrations apply to the extract or leachate produced by the toxicity characteristic leaching procedure (TCLP).

A waste is considered hazardous if the contaminants in the wastewater or in the soil TCLP extract equal or exceed the TCLP limits. TCLP testing is required only if total contaminant concentrations in soil equal or exceed 20 times the TCLP limits because TCLP uses a 20-to-1 dilution for the extract (U.S. EPA 1988a).

Water collected in the containment area ground water extraction trench is discharged to the local POTW. The water does not meet and physical or chemical hazardous waste criteria however it carries a hazardous waste code pertaining to leachate from the RCRA regulated landfill.

#### **A1.4.2 California-Regulated, Non-RCRA Hazardous Waste**

If the off-site disposal alternative is selected for the containment area, wastes shipped off-site will be categorized as RCRA, California-Regulated or non-hazardous at the time of excavation.

#### **A1.4.3 Other California Waste Classifications**

For waste discharged after 18 July 1997, solid waste classifications at Cal. Code Regs. tit. 27, §§ 20210, 20220, and 20230 are used to determine applicability of waste management requirements. These are summarized below.



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A “designated waste” under Cal. Code Regs. tit. 27, § 20210 is defined at Cal. Water Code § 13173. Under Cal. Water Code § 13173, designated waste is hazardous waste that has been granted a variance from hazardous waste management requirements or nonhazardous waste that consists of or contains pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state.

A nonhazardous solid waste under Cal. Code Regs. tit. 27, § 20220 is all putrescible and nonputrescible solid, semisolid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded waste (whether of solid or semisolid consistency), provided that such wastes do not contain wastes that must be managed as hazardous wastes or wastes that contain soluble pollutants in concentrations that exceed applicable water quality objectives or could cause degradation of waters of the state.

Under Cal. Code Regs. tit. 27, § 20230, inert waste is that subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives and does not contain significant quantities of decomposable waste.

## **A1.5 CAMU**

Consolidation would involve excavating hot spots within IA-H1 for the purpose of consolidating waste within the IA-H1 Containment Area. The RCRA regulated units and adjacent areas within the Containment Barrier would then be capped. The EPA has determined that disposal occurs when waste is placed in the land-based unit. However, movement within a unit does not constitute disposal or placement, and at CERCLA sites, an area of contamination can be considered comparable to a unit. Therefore, movement within the IA-H1 boundary does not constitute placement and RCRA waste generation and land disposal restrictions are not triggered.

The corrective action management unit (CAMU) requirements are federal ARARs for the IA-H1 Containment Area, where the excavated soil from remedial action sites will be placed. These requirements are set forth in Cal. Code Regs. tit. 22, § 66264.552(c) and (e); they allow for

consolidation of wastes in a more cost-effective approach while still protecting human health and the environment. Placement of remediation wastes into or within a CAMU does not constitute land disposal of hazardous waste or creation of a unit subject to minimum technology requirements and, as such, is not subject to land disposal requirements. The Containment Area within IA-H1 would be designated as a CAMU for the consolidation of excavated soil from 1) hot spots within IA-H1, 2) IR-16/B3 and IR-16/B5, and 3) the Marine Corps Firing Range, by applying the substantive CAMU regulations but not the procedural requirements. The Containment Area within IA-H1 is also designated as a CAMU for the consolidation of excavated soil from other Mare Island Remediation Sites. The consolidation within the IA-H1 Containment Area of excavated soil from other Mare Island Remediation Sites shall be subject to review and approval by DTSC. These other areas from which remediation waste will be removed and consolidated within the IA-H1 Containment Area will then be available for best use as defined in other site-specific cleanup plans. Wastes from other Mare Island Remediation Sites may be treated to allow for consolidation within the IA-H1 Containment Area. Waste that may be deemed acceptable for consolidation within the IA-H1 Containment Area shall be non-liquid, not excessively volatile, and not excessively mobile. Compliance with the following seven criteria of Cal. Code Regs. tit. 22, § 66264.552(c) was evaluated:

1. The CAMU shall facilitate the implementation of reliable, effective, protective, and cost-effective correction action measures.
  - The use of the Containment Area at IA-H1 as a CAMU for the disposal of excavated soil from the Marine Corps Firing Range (MCFR) and for Mare Island sites approved by DTSC is a reliable, effective, and protective remedy. A landfill cap will be placed over the consolidated soil to limit mobilization of contaminants and minimize potential exposure. The containment barrier already installed will prevent groundwater from the area from moving outside the Containment Area. The use of the Containment Area at IA-H1 as a CAMU is more cost-effective than other alternatives evaluated, such as off-site disposal.
2. Waste management activities associated with the CAMU shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes, hazardous substances, or hazardous constituents.

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- The consolidation of excavated soils from the MCFR and other DTSC approved Mare Island sites are not expected to result in any unacceptable risks at IA-H1. Material consolidated into the Containment Area will be of similar or lower contamination levels of the existing material and therefore will not change the overall contaminant characteristics. The landfill cap will prevent direct future exposure to humans and the environment. Based on containment area modeling using site-specific conditions and average concentrations, leaching to groundwater will not pose unacceptable risk to human health.
3. The CAMU shall include uncontaminated areas of the facility only if including such areas for the purpose of managing remediation waste is more protective than management of such wastes at contaminated areas of the facility.
    - Excavated soil from Mare Island sites will only be located within the existing footprint of the Containment Area and will not include uncontaminated areas.
  4. Areas within the CAMU where wastes remain in place after closure of the CAMU shall be managed and contained so as to minimize future releases, to the extent practicable.
    - The Containment Area will be capped to contain the excavated soil and minimize the potential for future releases from the soil to groundwater. The existing groundwater containment barrier and extraction system will eliminate the lateral migration of shallow groundwater.
  5. The CAMU shall expedite the timing of corrective action activity implementation, when appropriate and practicable.
    - Using the IA-H1 Containment Area for consolidation of excavated soil from the MCFR and other DTSC approved Mare Island sites will expedite the remedial action because it will take less time than off-site disposal and provide base material upon which to build the Containment Area cap.

6. The CAMU shall enable the use, when appropriate, of technologies (including innovative technologies) to enhance the long-term effectiveness of corrective actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the CAMU.
  - The mobility of contaminants in the soil excavated from the MCFR and other DTSC approved Mare Island sites will be reduced when placed in the Containment Area because the containment barrier will prevent migration of groundwater and because the landfill cap will be placed over the excavated soil.
7. The CAMU shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the CAMU.
  - The consolidation of soil from the MCFR or other DTSC approved Mare Island sites in to the IA-H1 Containment Area will aid in minimizing the land area of Mare Island within which wastes will remain in place. The Containment Area footprint will remain the same as currently defined by the existing groundwater containment barrier.

The design, operation, and closure and postclosure requirements for the CAMU are covered in the overall IA-H1 Containment Area and RCRA closure and postclosure requirements. The requirements for groundwater monitoring at IA-H1 are included in the Design Document and Water Quality Sampling and Analysis Plan.

The DTSC approved the use of the DI WET test for soil excavated at the Marine Corps Firing Range because it is more appropriate as it more closely matches the leachate characteristics likely to occur at IA-H1 than using the CCR Title 22WET or the Toxicity Characteristic Leaching Procedure (TCLP) (DTSC 4-19-2006).

**Table A-1**  
**Potential Federal Chemical-Specific<sup>a</sup> ARARs by Medium**

Requirement	Prerequisite	Citation <sup>b</sup>	ARAR Determination	Comments
<b>GROUNDWATER</b>				
<b>Safe Drinking Water Act (42 U.S.C., ch. 6A, § 300[f]–300[j]-26)<sup>c</sup></b>				
National primary drinking water standards are health-based standards for public water systems (MCLs).	Public water system.	40 C.F.R. § 141.11–141.13, excluding § 141.11(d)(3), 141.15, 141.16, 141.61(a) and (c), and 141.62(b)	Not an ARAR	The groundwater underlying IAH1 is not a potential drinking water supply due to high total dissolved solids.
MCLGs pertain to known or anticipated adverse health effects (also known as recommended MCLs).	Public water system.	40 C.F.R. § 141.50–141.51	Not an ARAR	The groundwater underlying IAH1 is not a potential drinking water supply due to high total dissolved solids.
National secondary drinking water regulations are standards for the aesthetic qualities of public water systems (SMCLs).	Public water system.	40 C.F.R. § 143.3	Not an ARAR	The groundwater underlying IAH1 is not a potential drinking water supply due to high total dissolved solids.
<b>Resource Conservation and Recovery Act (42 U.S.C., ch. 82, §§ 6901–6991[i])<sup>c</sup></b>				
Defines RCRA hazardous waste. A solid waste is characterized as toxic, based on the TCLP, if the waste exceeds the TCLP maximum concentrations.	Waste.	Cal. Code Regs. tit. 22, § 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100	Potential ARAR	Applicable to the RCRA Interim Status Landfill and IWTP Surface Impoundments of IAH1 within the Containment Area.  Potentially applicable for alternatives that include any materials removed for offsite disposal.

**Table A-1**  
**Potential Federal Chemical-Specific<sup>a</sup> ARARs by Medium**

<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation<sup>b</sup></b>	<b>ARAR Determination</b>	<b>Comments</b>
Groundwater protection standards: Owners/operators of RCRA treatment, storage, or disposal facilities must comply with conditions in this section that are designed to ensure that hazardous constituents entering the groundwater from a regulated unit do not exceed groundwater from a regulated unit do not exceed the concentration limits for contaminants of concern set forth under Cal. Code Regs. tit. 22, § 66264.94 in the uppermost aquifer underlying the waste management area of concern at the POC.	A regulated unit that receives or has received hazardous waste before 26 July 1982 or regulated units that ceased receiving hazardous waste prior to 26 July 1982 where constituents in or derived from the waste may pose a threat to human health or the environment.	Cal. Code Regs. tit. 22, § 66264.94, except 66264.94(a)(2) and 66264.94(b)	Potential ARAR	A potential ARAR for the Interim Status RCRA - regulated units.
The POC is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends through the uppermost aquifer underlying the regulated unit.	Hazardous waste treatment or disposal.	Cal. Code Regs. tit. 22, § 66265.95	Potential ARAR	A potential ARAR for the interim status RCRA - regulated units. Because of the installation of the slurry wall and practical purposes, the POC is defined as downgradient of the Containment Barrier.
<b>Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C., ch. 103, §§ 9601–9675)<sup>c</sup></b>				
ACLs using a point of exposure beyond the facility boundary.	Known or projected points of entry from groundwater to surface water.	CERCLA Section 121(d)(2) (B)(ii) 42 U.S.C., ch. 103, § 9621	Not applicable	No known or projected points of entry from Groundwater to surface water require ACLs. There may be a limited hydraulic communication between the surface water of the San Pablo Bay and the groundwater, and non-tidal wetland and groundwater within IA H1. Installation of the slurry wall is complete, the wall acts to limit or eliminate potential for contaminated groundwater to reach surface waters outside the Containment Area.

**Table A-1 (continued)**  
**Potential Federal Chemical- Specific<sup>a</sup> ARARs by Medium**

Requirement	Prerequisite	Citation <sup>b</sup>	ARAR Determination	Comments
<b>Clean Water Act of 1977, as Amended (33 U.S.C., ch. 26, §§ 1251–1387)<sup>c</sup></b>				
National Ambient Water Quality Criteria.	Discharges to waters of the United States and groundwater.	33 U.S.C. § 1314(a) and 42 U.S.C. § 9621(d)(2) 64 Fed. Reg. 19,781 (22 April 1999)	Potential ARAR	There may be a limited hydraulic communication between the surface water of the San Pablo Bay and the groundwater, and non-tidal wetland and groundwater within IAH1. Installation of the slurry wall is complete, the wall acts to limit or eliminate potential for contaminated groundwater to reach surface waters outside the Containment Area.
National Ambient Water Quality Criteria (continued).				
Water quality standards.	Discharges to waters of the United States.	40 C.F.R. § 131.36(b) and 131.38	Potential ARAR	There may be a limited hydraulic communication between the surface water of the San Pablo Bay and the groundwater, and non-tidal wetland and groundwater within IAH1. Installation of the slurry wall is complete, the wall acts to limit or eliminate potential for contaminated groundwater to reach surface waters outside the Containment Area.
Water quality standards.	Discharges to the San Francisco Bay/ Sacramento– San Joaquin Delta Estuary.	40 C.F.R. § 131.37	Relevant and Appropriate	IAH1 area is in the San Francisco Bay/San Joaquin delta estuary area.
<b>SURFACE WATER</b>				
<b>Resource Conservation and Recovery Act (42 U.S.C., ch. 82, §§ 6901–6991[i])<sup>c</sup></b>				
Groundwater protection standards: Owners/operators of RCRA treatment, storage, or disposal facilities must comply with conditions in this section that are designed to ensure that hazardous constituents entering the.	A regulated unit that receives or has received hazardous waste before 26 July 1982 or regulated units that ceased receiving	Cal. Code Regs. tit. 22, § 66264.94, except 66264.94(a)(2) and 66264.94(b)	Potential ARAR	Applicable for the interim status RCRA - regulated units.

**Table A-1 (continued)**  
**Potential Federal Chemical- Specific<sup>a</sup> ARARs by Medium**

<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation<sup>b</sup></b>	<b>ARAR Determination</b>	<b>Comments</b>
groundwater from a regulated unit do not exceed the concentration limits for contaminants of concern set forth under Cal. Code Regs. tit. 22, § 66264.94 in the uppermost aquifer underlying the waste management area of concern at the POC.	hazardous waste prior to 26 July 1982 where constituents in or derived from the waste may pose a threat to human health or the environment.			
<b>Safe Drinking Water Act (42 U.S.C., ch. 6A, § 300[f]–300[j]-26)<sup>c</sup></b>				
National primary drinking water standards are health-based standards for public water systems (MCLs).	Public water system.	40 C.F.R. § 141.11–141.13, excluding § 141.11(d)(3), 141.15, 141.16, 141.61(a) and (c), and 141.62(b)	Not an ARAR	Surface water at the site is not a potential drinking water source, and is not part of a public water system.
Ensure safety of public water systems; remedial actions must meet cleanup standards; MCLGs pertain to known or anticipated health effects (also known as recommended MCLs).	Public water system; remedial activities impacting groundwater; groundwater that is a potential source of drinking water.	40 C.F.R. § 141.50–141.51	Not an ARAR	Surface water at the site is not a potential drinking water source, and is not part of a public water system.
National secondary drinking water regulations are standards for the aesthetic qualities of public water systems (SMCLs).	Public water system.	40 C.F.R. § 143.3	Not an ARAR	Surface water at the site is not a potential drinking water source, and is not part of a public water system.
<b>Clean Water Act, as Amended (33 U.S.C., ch. 26, §§ 1251–1387)<sup>c</sup></b>				
National ambient water quality standards.	Discharges to waters of the United States.	40 C.F.R. § 131.36(b)	Potential ARAR	There is a surface water runoff to the wetlands within IAH1. Surface water contamination may be contributed to the run-off and/or soil/sediment contamination.



**Table A-1 (continued)**  
**Potential Federal Chemical- Specific<sup>a</sup> ARARs by Medium**

<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation<sup>b</sup></b>	<b>ARAR Determination</b>	<b>Comments</b>
Water quality standards.	Discharges to the San Francisco Bay/ Sacramento–San Joaquin Delta Estuary.	40 C.F.R. § 131.37	Potential ARAR	IAH1 is near the San Francisco Bay and the Sacramento–San Joaquin delta estuary.
Effluent limitations that meet technology-based requirements, including BCPCT and BAT economically achievable.	Discharges to waters of the United States.	33 U.S.C., ch. 26, § 1311(b)(2) (CWA § 301[b])	Not applicable	No direct discharge of treated waters will occur at the site.
Water quality criteria.	Discharges to waters of the United States and groundwater.	33 U.S.C., ch. 26, § 1314(a) and 42 U.S.C., ch. 103, § 9621(d)(2) 64 Fed. Reg. 19,781 (22 April 1999)	Potential ARAR	There is a surface runoff to the non-tidal wetlands within IAH1.
<b>Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C., ch. 103, §§ 9601–9675)<sup>c</sup></b>				
ACLs using a point of exposure beyond the facility boundary.	Known or projected points of entry from groundwater to surface water.	CERCLA Section 121(d)(2)(B)(ii) 42 U.S.C., ch. 103, § 9621	Not applicable	No contaminated known or projected points of entry. The completed slurry wall reduces or eliminates the potential for contaminated groundwater to enter surface waters outside the Containment Area.
<b>SOIL</b>				
<b>Resource Conservation and Recovery Act (42 U.S.C., ch. 82, §§ 6901–6991[i])<sup>c</sup></b>				
Defines RCRA hazardous waste. A solid waste is characterized as toxic, based on the TCLP, if the waste exceeds the TCLP maximum concentrations.	Waste.	Cal. Code Regs. tit. 22, § 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100	Potential ARAR	Potentially applicable for removal option for determining whether waste is hazardous.

**Table A-1 (continued)**  
**Potential Federal Chemical- Specific<sup>a</sup> ARARs by Medium**

<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation<sup>b</sup></b>	<b>ARAR Determination</b>	<b>Comments</b>
Groundwater Protection Standards: requirements to ensure that hazardous constituents entering the groundwater from a regulated unit do not exceed the concentration limits for contaminants of concern in the uppermost aquifer underlying the waste management area of concern at the POC.	A regulated unit that receives or has received hazardous waste before 26 July 1982 or regulated units that ceased receiving hazardous waste prior to 26 July 1982 where constituents in or derived from the waste may pose a threat to human health or the environment.	Cal. Code Regs. tit. 22, § 66264.94(a)(1) and (3), (c), (d), and (e)	Potential ARAR	Applicable to the RCRA-regulated unit within IAH1.
LDRs prohibit disposal of hazardous waste unless treatment standards are met.	Hazardous waste land disposal.	Cal. Code Regs. tit. 22, § 66268.1(f)	Potentially Applicable	Applicable if the off-site disposal alternatives are chosen and hazardous waste is disposed of to land.
Treatment standards including technology requirements before hazardous waste can be disposed to land.	Hazardous waste land disposal.	Cal. Code Regs. tit. 22, § 66268.40	Potential ARAR	Potential ARAR only for off-site disposal alternatives.
Universal Treatment Standards used to comply with treatment standards.	Hazardous waste land disposal.	Cal. Code Regs. tit. 22, § 66268.48	Potential ARAR	Potential ARAR only for off-site disposal options
<b>Toxic Substances Control Act (15 U.S.C., ch. 53, §§ 2601–2692)<sup>c</sup></b>				
Regulates storage and disposal of PCB remediation waste. There are three options: a) self-implementing on-site cleanup and disposal; b) performance-based disposal using existing approved disposal technologies; and c) risk-based disposal.	Soils, debris, sludge, or dredged materials contaminated with PCBs at concentrations greater than 50 ppm.	40 C.F.R. § 761.61(a)(4), (b), and (c)	Potential ARAR	PCB contamination is noted on-site. Note that the State requirements are more strict.

**Table A-1 (continued)**  
**Potential Federal Chemical-Specific<sup>a</sup> ARARs by Medium**

Requirement	Prerequisite	Citation <sup>b</sup>	ARAR Determination	Comments
<b>Military Munitions Rule (40 C.F.R. pt. 266 subpt. M)<sup>c</sup></b>				
Identification of hazardous waste munitions and treatment and storage requirements for hazardous waste munitions.	Storage of military munitions.	40 C.F.R. pt. 266, subpt. M	Relevant or Appropriate	Only munition debris has been found at the site, however, the potential for uncovering munitions exists during excavation activities and/or if removal and offsite disposal options are implemented.
<b>SEDIMENT</b>				
<b>Resource Conservation and Recovery Act (42 U.S.C., ch. 82, §§ 6901–6991[i])<sup>c</sup></b>				
Definition of RCRA hazardous waste.	Waste.	Cal. Code Regs. tit. 22, § 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100	Potential ARAR	Potential ARAR for off-site disposal alternatives in the non-tidal wetland area.
A solid waste is characterized as toxic, based on the TCLP, if the waste exceeds the TCLP maximum concentrations.	Waste.	40 C.F.R. pt. 261.24(a) Cal. Code Regs. tit. 22, § 66261.24(a)(1)(B)	Potential ARAR	Potential ARAR for off-site disposal alternatives in the non-tidal wetland area.
<b>Clean Water Act, as Amended (33 U.S.C., ch. 26, §§ 1251–1387)<sup>c</sup></b>				
National ambient water quality standards.	Discharges to waters of the United States.	40 C.F.R. § 131.36(b) and 131.38	Potential ARAR	Contamination in the non-tidal wetland sediments have not been shown to correlate with water quality; however, the potential exists as some water and sediment contaminants cover the same. Other possible sources include run-off from upland areas and stormwater.

**Table A-1 (continued)**  
**Potential Federal Chemical-Specific<sup>a</sup> ARARs by Medium**

Requirement	Prerequisite	Citation <sup>b</sup>	ARAR Determination	Comments
<b>AIR</b>				
<b>Clean Air Act (42 U.S.C., ch. 85, §§ 7401–7671)<sup>c</sup></b>				
NAAQS: Primary and secondary standards for ambient air quality to protect public health and welfare (including standards for particulate matter and lead).	Contamination of air affecting public health and welfare.	40 C.F.R. § 50.4–50.12	Not an ARAR	Not enforceable and therefore not an ARAR.

**Notes:**

- <sup>a</sup> Many potential action-specific ARARs contain chemical-specific limitations and are addressed in the action-specific ARAR tables
- <sup>b</sup> Only the substantive provisions of the requirements cited in this table are potential ARARs
- <sup>c</sup> Statutes and policies, and their citations, are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the DON accepts the entire statutes or policies as potential ARARs; specific potential ARARs are addressed in the table below each general heading; only pertinent substantive requirements of the specific citations are considered potential ARARs

**Acronyms/Abbreviations:**

<p>ACL – alternative concentration limit          APCD – Air Pollution Control District          ARAR – applicable or relevant and appropriate requirement          BAT – best available technology          BCPCT – best conventional pollution control technology          CAA – Clean Air Act          Cal. Code Regs. – <i>California Code of Regulations</i>          CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act          C.F.R. – <i>Code of Federal Regulations</i>          ch. – chapter          COC – chemical of concern          CWA – Clean Water Act          DoD – Department of Defense          DON – Department of the Navy          Fed. Reg. – <i>Federal Register</i>          LDR – land disposal restriction          MCL – maximum contaminant level          MCLG – maximum contaminant level goal          NAAQS – National Ambient Air Quality Standards (primary and secondary)          NCP – National Oil and Hazardous Substances Pollution Contingency Plan</p>	<p>NPDES – National Pollutant Discharge Elimination System          OU – operable unit          PCB – polychlorinated biphenyl          POC – point of compliance          ppm – parts per million          ppm<sub>w</sub> – parts per million by weight          pt. – part          R3M – Range Rule Risk Methodology          RAO – remedial action objective          RCRA – Resource Conservation and Recovery Act          RWQCB – (California) Regional Water Quality Control Board              <b>San Francisco Bay</b>          § – section          SIP – State Implementation Plan          SMCL – secondary maximum contaminant level          subpt. – subpart          TBC – to be considered          TCLP – toxicity characteristic leaching procedure          tit. – title          U.S.C. – <i>United States Code</i>          U.S. EPA – United States Environmental Protection Agency          UXO – unexploded ordnance          VOC – volatile organic compound</p>
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**Table A-2**  
**Potential State Chemical-Specific<sup>a</sup> ARARs by Medium**

*[Include only those requirements identified specifically for the project site in the table below.]*

Requirement	Prerequisite	Citation <sup>b</sup>	ARAR Determination	Comments
<b>GROUNDWATER, SURFACE WATER, SOIL, SEDIMENTS, AND AIR</b>				
<b>Cal/EPA Department of Toxic Substances Control<sup>c</sup></b>				
Definition of “non-RCRA hazardous waste.”	Waste.	Cal. Code Regs. tit. 22, § 66261.22(a)(3) and (4), § 66261.24(a)(2)–(a)(8), § 66261.101, § 66261.3(a)(2)(C) or § 66261.3(a)(2)(F)	Potential ARAR	Applicable only for removal alternatives.
State MCL list.	Source of drinking water.	Cal. Code Regs. tit. 22, §§ 64431 and 64444	Not Applicable	No potential drinking water sources present at the site. RWQCB agrees that drinking water is not a beneficial use for waters at this site.
<b>State and Regional Water Quality Control Boards<sup>c</sup></b>				
Authorizes the SWRCB and RWQCB to establish in water quality control plans beneficial uses and numerical and narrative standards to protect both surface water and groundwater quality. Authorizes regional water boards to issue permits for discharges to land or surface or groundwater that could affect water quality, including NPDES permits, and to take enforcement action to protect water quality.		Cal. Water Code, div. 7, §§ 13241, 13243, 13263(a), 13269, and 13360 (Porter-Cologne Water Quality Control Act)	Potential ARAR	The DON accepts the substantive provisions of §§ 13241, 13243, 13263(a), 13269, and 13360 of the Porter-Cologne Act enabling legislation, as implemented through the beneficial uses, WQOs, waste discharge requirements, promulgated policies of the Basin Plan for the San Francisco Bay Region, as potential ARARs. Waste discharge requirements will be required for this site.

**Table A-2**  
**Potential State Chemical-Specific<sup>a</sup> ARARs by Medium**

**[Include only those requirements identified specifically for the project site in the table below.]**

		Cal. Water Code, div. 7, § 13304	Not an ARAR	Section 13304 does not constitute an ARAR, because it does not itself establish or contain substantive environmental “standards, requirements, criteria or limitations” (CERCLA Section 121) and is not in itself directive in intent. In addition, Section 13304 is not more stringent than the substantive requirements of the potential state and federal ARARs identified in this table and Table A-2-2.
Describes the water basins in <i>San Francisco Bay</i> , establishes beneficial uses of groundwater and surface water, establishes WQOs, including narrative and numerical standards, establishes implementation plans to meet WQOs and protect beneficial uses, and incorporates statewide water quality control plans and p Establishes the policy that high-quality waters of the state “shall be maintained to the maximum extent possible” consistent with the “maximum benefit to the people of the State.” It provides that whenever the existing quality of water is better than that required by applicable water quality policies, such existing high-quality water will be maintained until it has been demonstrated to the state that any change will be consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in the policies. It also states that any		Comprehensive Water Quality Control Plan for the San Francisco Bay (Basin Plan) (Cal. Water Code § 13240)	Potential ARAR	Substantive requirements pertaining to beneficial uses, WQOs, and certain statewide water quality control plans are potential state ARARs for the surface water and groundwater components of this response action.

**Table A-2**  
**Potential State Chemical-Specific<sup>a</sup> ARARs by Medium**

**[Include only those requirements identified specifically for the project site in the table below.]**

activity that produces or may produce a waste or increased volume or concentration of waste and that discharges or proposes to discharge to existing high-quality waters will be required to meet waste-discharge requirements that will result in the best practicable treatment or control of the discharge.		Statement of Policy With Respect to Maintaining High Quality of Waters in California, SWRCB Res. 68-16	Not an ARAR	There is no discharge to high quality waters at IAH1
Describes requirements for RWQCB oversight of investigation and cleanup and abatement activities resulting from discharges of hazardous substances. RWQCB may decide on cleanup and abatement goals and objectives for the protection of water quality and beneficial uses of water within each region. Establishes criteria for "containment zones" where cleanup to established water-quality goals is not economically or technically practicable.		Policies and procedures for investigation and cleanup and abatement of discharges under Cal. Water Code § 13304, SWRCB Res. 92-49	Not an ARAR	Not more stringent than federal regulations at Cal. Code Regs. tit. 22, § 66265.94 and 66265.95.
Incorporated into all regional board basin plans. Designates all groundwater and surface waters of the state as drinking water except where the TDS is greater than 3,000 ppm, the well yield is less than 200 gpd from a single well, the water is a geothermal resource or in a water conveyance facility, or the water cannot reasonably be treated for domestic use using either best management practices or best economically achievable treatment practices.		SWRCB Res. 88-63 (Sources of Drinking Water Policy)	Not an ARAR	No drinking water sources are present at the site.
Establishes concentration limits for cleanup actions, including groundwater, surface water, and the unsaturated zones for other than hazardous waste at background. Allows a higher cleanup limit (but not to exceed MCLs) if background is not technically or economically achievable.		Cal. Code Regs. tit. 27, §§ 20380(a); 20400(a), (c), (d), (e), and (g); and 20405	Not an ARAR	Not more stringent than federal regulations at Cal. Code Regs. tit. 22, § 66265.94 and 66265.95.

**Table A-2**  
**Potential State Chemical-Specific<sup>a</sup> ARARs by Medium**

**[Include only those requirements identified specifically for the project site in the table below.]**

Establishes concentration limits for cleanup actions, including groundwater, surface water, and the unsaturated zones for hazardous waste at background. Allows a higher cleanup limit (but not to exceed MCLs) if background is not technically or economically achievable.		Cal. Code Regs. tit. 23, §§ 2550(a); 2550.4(d), (e), and (f); and 2550.5	Not an ARAR	Cal. Code Regs. tit. 23, § 2550(a) addresses the general applicability of other standards in Chapter 15 and does not contain standards itself. Cal. Code Regs. tit. 23, §§ 2550.4(d), (e), and (f) and 2550.5 are not more stringent than federal ARARs at Cal. Code Regs. tit. 22, § 66265.94 and 66265.95.
Establishes beneficial uses of ocean waters, numerical and narrative WQOs, effluent quality objectives including toxic material limitations, and discharge prohibitions.		California Ocean Plan, Water Quality Control Plan for Ocean Waters of California, SWRCB Res. 97-026 (Cal. Water Code § 13170.2)	Potential ARAR	Contaminated groundwater at the IAH1 Containment Area is enclosed by a slurry wall and extraction trench to eliminate or reduce the potential for reaching wetlands and beyond.
Requires analysis for each priority pollutant to determine if water-quality-based effluent limitation is required. Provides effluent limitation development methodology.	Discharges of toxic priority pollutants into inland surface waters, bays, or estuaries.	Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Inland Surface Waters Plan) (SWRCB 2000), §§ 1.3 and 1.4	Potential ARAR	Potentially applicable for surface water run-off at IAH1.

**Notes:**

- <sup>a</sup> Many potential action-specific ARARs contain chemical-specific limitations and are addressed in the action-specific ARAR tables
- <sup>b</sup> Only the substantive provisions of the requirements cited in this table are potential ARARs
- <sup>c</sup> Statutes and policies, and their citations, are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the DON accepts the entire statutes or policies as potential ARARs; specific potential ARARs are addressed in the table below each general heading; only pertinent substantive requirements of specific citations are considered potential ARARs



**Table A-2**  
**Potential State Chemical-Specific<sup>a</sup> ARARs by Medium**

**[Include only those requirements identified specifically for the project site in the table below.]**

Acronyms/Abbreviations:

ARAR – applicable or relevant and appropriate requirement  
Cal. Code Regs. – *California Code of Regulations*  
Cal/EPA – California Environmental Protection Agency  
Cal. Water Code – *California Water Code*  
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act  
div. – division  
DON – Department of the Navy  
gpd – gallons per day  
MCL – maximum contaminant level  
NPDES – National Pollutant Discharge Elimination System  
OU – operable unit  
ppm – parts per million  
RCRA – Resource Conservation and Recovery Act  
Res. – Resolution  
RWQCB – (California) Regional Water Quality Control Board  
§ – section  
SIP – State Implementation Plan  
SWRCB – (California) State Water Resources Control Board  
TDS – total dissolved solids  
tit. – title  
WQO – water quality objective

**Table A-3**

**Potential Federal Location-Specific ARARs**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation<sup>a</sup></b>	<b>ARAR Determination</b>	<b>Comments</b>
<b>National Historic Preservation Act of 1966, as Amended (16 U.S.C. § 470–470x-6)<sup>b</sup></b>					
Historic project owned or controlled by federal agency	Action to preserve historic properties; planning of action to minimize harm to properties listed on or eligible for listing on the National Register of Historic Places.	Property included in or eligible for the National Register of Historic Places.	16 U.S.C. § 470–470x-6 36 C.F.R. pt. 800 40 C.F.R. § 6.301(b)	Not Applicable	Mare Island is listed, however there are no buildings or structures in IAH1 Area other than project offices and support. Remediation activities are not close to any structures.
<b>Archaeological and Historic Preservation Act (16 U.S.C. § 469–469c-1)<sup>b</sup></b>					
Within area where action may cause irreparable harm, loss, or destruction of significant artifacts	Construction on previously undisturbed land would require an archaeological survey of the area. Data recovery and preservation would be required if significant archaeological or historical data were found on-site. The responsible official or Secretary of the Interior is authorized to undertake data recovery and preservation.	Regulated alteration of terrain caused as a result of a federal construction project or federally licensed activity or program where action may cause irreparable harm, loss, or destruction of significant artifacts.	16 U.S.C. § 469–469c-1 40 C.F.R. § 6.301(c)	TBC	No potential for disturbance of any known significant artifacts in the IAH1. The activity in this area was documented as post 1949. A cultural resources study is underway for Mare Island as a whole separate from this project.
<b>Historic Sites, Buildings, and Antiquities Act of 1935 (16 U.S.C. §§ 461–467)<sup>b</sup></b>					
Historic sites	Avoid undesirable impacts on landmarks.	Areas designated as historic sites.	16 U.S.C. §§ 461–467 40 C.F.R. § 6.301(a)	Not Applicable	No areas to be disturbed during the response action will impact listed or potentially listed structures.

**Table A-3 (continued)**

**Potential Federal Location-Specific ARARs**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation<sup>a</sup></b>	<b>ARAR Determination</b>	<b>Comments</b>
<b>Archaeological Resources Protection Act of 1979, as Amended (16 U.S.C. § 470aa–470mm)<sup>b</sup></b>					
Archaeological resources on federal land	Prohibits unauthorized excavation, removal, damage, alteration, or defacement of archaeological resources located on public lands unless such action is conducted pursuant to a permit.	Archaeological resources on federal land.	Pub. L. No. 96-95  16 U.S.C. § 470aa–470mm	Not Applicable	IAH1 does not contain known archaeological resources.
<b>Exec. Order No. 11990, Protection of Wetlands<sup>b</sup></b>					
Wetland	Action to minimize the destruction, loss, or degradation of wetlands.	Wetland meeting definition of Section 7.	40 C.F.R. § 6.302(a)	Relevant and Appropriate	Non-tidal wetlands are present at the site and may be impacted.
<b>Exec. Order No. 11988, Floodplain Management<sup>b</sup></b>					
Within floodplain	Actions taken should avoid adverse effects, minimize potential harm, restore and preserve natural and beneficial values.	Action that will occur in a floodplain (i.e., lowlands) and relatively flat areas adjoining inland and coastal waters and other flood-prone areas.	40 C.F.R. § 6.302(b)  40 C.F.R. pt. 6, app. A, excluding § 6(a)(2), 6(a)(4), and 6(a)(6)	Relevant and Appropriate	Actions may occur in the non-tidal wetlands, however there should not be an impact on the floodplain.
<b>Clean Water Act of 1977, as Amended, Section 404 (33 U.S.C. § 1344)<sup>b</sup></b>					
Wetland	Action to prohibit discharge of dredged or fill material into wetland without permit.	Wetland as defined by Exec. Order No. 11990 Section 7.	33 U.S.C. § 1344	Potential ARAR	Potential ARAR for capping alternative for the Containment Area.

**Table A-3 (continued)**

**Potential Federal Location-Specific ARARs**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation<sup>a</sup></b>	<b>ARAR Determination</b>	<b>Comments</b>
<b>Resource Conservation and Recovery Act (42 U.S.C. §§ 6901–6991[i])<sup>b</sup></b>					
Within 100-year floodplain	Facility must be designed, constructed, operated, and maintained to avoid washout.	RCRA hazardous waste; treatment, storage, or disposal of hazardous waste.	Cal. Code Regs. tit. 22, § 66264.18(b)	Not an ARAR	Remedies proposed for the RCRA Interim Status Facilities would not adversely effect the floodplain.
<b>Wild and Scenic Rivers Act (16 U.S.C. §§ 1271–1287)<sup>b</sup></b>					
Within area affecting national wild, scenic, or recreational river	Avoid taking or assisting in action that will have direct adverse effect on scenic river.	Activities that affect or may affect any of the rivers specified in 16 U.S.C. §1276(a).	16 U.S.C. §§ 1271–1287	Not an ARAR	IAH1 is not near wild, scenic, or recreational rivers.
<b>Fish and Wildlife Coordination Act (16 U.S.C. §§ 661–666c)<sup>b</sup></b>					
Area affecting stream or other water body	Action taken should protect fish or wildlife.	Diversion, channeling, or other activity that modifies a stream or other water body and affects fish or wildlife.	16 U.S.C. § 662	Potential ARAR	Remedial Actions for non-tidal wetland areas could effect wildlife. Mitigation measures will increase non-tidal wetlands, therefore beneficially affecting wildlife.
<b>Rivers and Harbors Act of 1899 (33 U.S.C. §§ 401–413)<sup>b</sup></b>					
Navigable waters	Permits required for structures or work in or affecting navigable waters.	Activities affecting navigable waters.	33 U.S.C. § 403 33 C.F.R. § 322	Potential ARAR	Will depend on which alternative selected; any alternative other than no action in both the Containment Area and non-tidal wetland area would have affects from remediation or mitigation on non-tidal wetlands.

**Table A-3 (continued)**

**Potential Federal Location-Specific ARARs**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation<sup>a</sup></b>	<b>ARAR Determination</b>	<b>Comments</b>
<b>Endangered Species Act of 1973 (16 U.S.C. §§ 1531–1543)<sup>b</sup></b>					
Habitat upon which endangered species or threatened species depend	Federal agencies may not jeopardize the continued existence of any listed species or cause the destruction or adverse modification of critical habitat. The Endangered Species Committee may grant an exemption for agency action if reasonable mitigation and enhancement measures such as propagation, transplantation, and habitat acquisition and improvement are implemented.	Determination of effect upon endangered or threatened species or its habitat. Critical habitat upon which endangered species or threatened species depend.	16 U.S.C. § 1536(a), (h)(1)(B)	Potential ARAR	The Salt Marsh Harvest Mouse, an endangered species, is known to reside in the non-tidal wetland areas of IAH1. Action must be conducted to conserve endangered species.
<b>Migratory Bird Treaty Act of 1972 (16 U.S.C. §§ 703–712)<sup>b</sup></b>					
Migratory bird area	Protects almost all species of native migratory birds in the U.S. from unregulated “take,” which can include poisoning at hazardous waste sites.	Presence of migratory birds.	16 U.S.C. § 703	Relevant and Appropriate	Migratory birds are present at the site. Remediation in non-tidal wetland areas should decrease the potential threat from the site; the mitigation measures that increase the non-tidal wetland and ponding areas should enhance bird habitat.
<b>Marine Mammal Protection Act (16 U.S.C. §§ 1361–1421h)<sup>b</sup></b>					
Marine mammal area	Protects any marine mammal in the U.S. except as provided by international treaties from unregulated “take.”	Presence of marine mammals.	16 U.S.C. § 1372(a)(2)	Not an ARAR	No marine mammals are in the non-tidal wetlands or upland areas of IAH1.

**Table A-3 (continued)**

**Potential Federal Location-Specific ARARs**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation<sup>a</sup></b>	<b>ARAR Determination</b>	<b>Comments</b>
<b>Magnuson-Stevens Fishery Conservation and Management Act of 1976, as Amended (16 U.S.C. §§ 1801–1882)<sup>b</sup></b>					
Fishery under management	Provides for conservation and management of specified fisheries within specified fishery conservation zones.	Presence of managed fisheries.	16 U.S.C. §§ 1801–1882	Not an ARAR	There are no a managed fisheries at or near the site.
<b>National Wildlife Refuge System Administration Act of 1996 (16 U.S.C. § 668dd–668ee)<sup>b</sup></b>					
Wildlife refuge	No person shall take any animal or plant on any national wildlife refuge, except as authorized under 50 C.F.R. § 27.51. The disposing or dumping of wastes is prohibited.	Area designated as part of National Wildlife Refuge System.	16 U.S.C. § 668dd–668ee  Substantive provisions of 50 C.F.R. § 27.11–27.97	Not an ARAR	IAH1 is not designated as part of the National Wildlife Refuge System.
<b>Wilderness Act (16 U.S.C. §§ 1131–1136)<sup>b</sup></b>					
Wilderness area	Area must be administered in such a manner as will leave it unimpaired as wilderness and preserve its wilderness character.	Federally owned area designated as wilderness area.	16 U.S.C. §§ 1131–1136  50 C.F.R. §§ 35.1–35.14	Not an ARAR	IA H1 is not a federally owned wilderness area.
<b>Coastal Zone Management Act (16 U.S.C. §§ 1451–1464)<sup>b</sup></b>					
Within coastal zone	Conduct activities in a manner consistent with approved state management programs.	Activities affecting the coastal zone including lands thereunder and adjacent shore land.	16 U.S.C. § 1456(c)  15 C.F.R. § 930	Relevant and Appropriate	Potentially relevant and appropriate if the site is near a coastal area.
<b>Resource Conservation and Recovery Act (42 U.S.C. §§ 6901–6991[i])<sup>b</sup></b>					
Within 61 meters (200 feet) of a fault displaced in Holocene time	New treatment, storage, or disposal of hazardous waste prohibited.	RCRA hazardous waste; treatment, storage, or disposal of hazardous waste.	Cal. Code Regs. tit. 22, § 66264.18(a)	Not an ARAR	IA H1 is not within 200 feet of a Holocene fault.

**Table A-3 (continued)**

**Potential Federal Location-Specific ARARs**

<b>Location</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation<sup>a</sup></b>	<b>ARAR Determination</b>	<b>Comments</b>
Within salt dome formation, underground mine, or cave	Placement of noncontainerized or bulk liquid hazardous waste prohibited.	RCRA hazardous waste; placement.	Cal. Code Regs. tit. 22, § 66264.18(c)	Not an ARAR	IA H1 is not near a salt formation, mine, or cave. See the geologic description of the Island in the RI.

**Notes:**

- <sup>a</sup> Only the substantive provisions of the requirements cited in this table are potential ARARs
- <sup>b</sup> Statutes and policies, and their citations, are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the DON accepts the entire statutes or policies as potential ARARs; specific potential ARARs are addressed in the table below each general heading; only substantive requirements of the specific citations are considered potential ARARs

**Acronyms/Abbreviations:**

app. – appendix  
 ARAR – applicable or relevant and appropriate requirement  
 CCC – California Coastal Commission  
 Cal. Code Regs. – *California Code of Regulations*  
 C.F.R. – *Code of Federal Regulations*  
 DON – Department of the Navy  
 Exec. Order No. – executive order number  
 FEMA – Federal Emergency Management Agency  
 pt. – part  
 Pub. L. No. – public law number  
 RCRA – Resource Conservation and Recovery Act  
 § – section  
 U.S. – United States  
 U.S.C. – *United States Code*

**Table A-4**  
**Potential State Location-Specific ARARs**

Location	Requirement	Prerequisite	Citation <sup>a</sup>	ARAR Determination	Comments
<b>California Endangered Species Act (Cal. Fish &amp; Game Code §§ 2050–2116)<sup>b</sup></b>					
Endangered species habitat	Department policy and legislative findings and definitions for significant natural areas.	Activity taking place in an endangered species habitat and significant natural area.	Cal. Fish & Game Code §§ 2050–2068	Not an ARAR	Procedural; not a “cleanup standard, standard of control,” or “other substantive requirement, criteria, or limitation.”
Endangered species habitat	Procedures for listing endangered species.	Threatened or endangered species determination.	Cal. Fish & Game Code § 2070	Not an ARAR	Procedural; not a “cleanup standard, standard of control,” or “other substantive requirement, criteria, or limitation.”
Endangered species habitat	No person shall import, export, take, possess, or sell any endangered or threatened species or part or product thereof.	Threatened or endangered species determination on or before 01 January 1985 or a candidate species with proper notification.	Cal. Fish & Game Code § 2080	ARAR	An endangered species is present at the site. Remediation alternatives should lessen the potential threat to the Salt Marsh Harvest Mouse and mitigation activities should enhance endangered species habitat.
Endangered species habitat	Ensures that action taken will not jeopardize the survival and reproduction of any threatened or endangered species.	Threatened or endangered species determination or a candidate species with proper notification.	Cal. Fish & Game Code §§ 2090–2096	Not an ARAR	Not effective after 01 January 1994.



**Table A-4 (continued)**  
**Potential State Location-Specific ARARs**

Location	Requirement	Prerequisite	Citation <sup>a</sup>	ARAR Determination	Comments
<b>California Coastal Act of 1976<sup>b</sup></b>					
Coast	Regulates activities associated with development to control direct significant impacts on coastal waters and to protect state and national interests in California coastal resources.	Any activity which could impact coastal waters and resources.	Cal. Pub. Res. Code §§ 30000–30900; Cal. Code Regs. tit. 14, §§ 13001–13666.4	To be considered	May be potentially relevant and appropriate for activities within coastal zone. However, remediation activities would not have direct significant impacts on coastal waters.

**Notes:**

- <sup>a</sup> Only the substantive provisions of the requirements cited in this table are potential ARARs
- <sup>b</sup> Statutes and policies, and their citations, are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the DON accepts the entire statutes or policies as potential ARARs; specific potential ARARs follow each general heading; only substantive requirements of the specific citations are considered potential ARARs

**Acronyms/Abbreviations:**

ARAR – applicable or relevant and appropriate requirement  
 Cal. Code Regs. – *California Code of Regulations*  
 Cal. Fish & Game Code – *California Fish and Game Code*  
 Cal. Pub. Res. Code – *California Public Resources Code*  
 CCC – California Coastal Commission  
 DON – Department of the Navy  
 § – section

**Table A-5  
Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>Resource Conservation and Recovery Act (42 U.S.C. §§ 6901–6991[i])*</b>							
On-site waste generation	Person who generates waste shall determine if that waste is a hazardous waste.	Generator of waste.	Cal. Code Regs. tit. 22, § 66262.10(a), 66262.11	3			Applicable for any operation where hazardous waste is generated. Applicable for removal and off-site disposal options 3. The determination of whether wastes, generated during remedial activities, are hazardous will be made at the time the wastes are generated.
On-site waste generation	Requirements for analyzing waste for determining whether waste is hazardous.	Generator of waste.	Cal. Code Regs. tit. 22, § 66264.13(a) and (b)	3			Applicable for off-site disposal alternatives.
Hazardous waste accumulation	On-site hazardous waste accumulation is allowed for up to 90 days as long as the waste is stored in containers in accordance with § 66262.171–178 or in tanks, on drip pads, inside buildings, is labeled and dated, etc.	Accumulate hazardous waste.	Cal. Code Regs. tit. 22, § 66262.34	3			Potentially applicable if removal and off-site disposal alternatives are chosen. The determination of whether wastes, generated during response action activities, are hazardous will be made at the time the wastes are generated.

**Table A-5 (continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Site closure	Minimize the need for further maintenance controls and minimize or eliminate, to the extent necessary to protect human health and the environment, postclosure escape of hazardous waste, hazardous constituents, leachate, contaminated rainfall or runoff, or waste decomposition products to groundwater or surface water or to the atmosphere.	Hazardous waste management facility.	Cal. Code Regs. tit. 22, § 66265.111(a) and (b)	1 2			The Interim Status RCRA-regulated unit will require closure.
General landfill closure requirements	The RCRA landfill closure requirements (Cal. Code Regs. title 22, § 66264.111 and 66264.310) are general performance standards that eliminate the need for further maintenance and control and eliminate post-closure escape of hazardous wastes, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products.	Hazardous waste management facility.	Cal. Code Regs. tit. 22, § 66265.310	2			The grading conducted for the capping/cover options at IA H1 does not constitute placement or disposal under RCRA and, therefore, the generator requirements for hazardous waste determinations contained in Cal. Code Regs. title 22, § 66265.310 are not triggered.
Clean closure	During the partial and final closure periods, all contaminated equipment, structures and soils shall be properly disposed or decontaminated by removing all hazardous waste and residues.	Hazardous waste management facility.	Cal. Code Regs. tit. 22, § 66265.114	3			Potentially applicable if the removal and off-site disposal alternative is chosen for the containment area which includes the interim status regulated facility.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Container storage	Containers of RCRA hazardous waste must be: <ul style="list-style-type: none"> <li>• maintained in good condition,</li> <li>• compatible with hazardous waste to be stored, and</li> <li>• closed during storage except to add or remove waste.</li> </ul>	Storage of RCRA hazardous waste not meeting small-quantity generator criteria before treatment, disposal, or storage elsewhere, in a container.	Cal. Code Regs. tit. 22, § 66264.171, .172, .173				Not an ARAR. No storage of any containerized generated waste for more than 90 days is proposed.
Use of tank systems	Requirements for the design and installation of new tank systems including strength, tightness testing, damage control, support, corrosion control, etc.	Tank systems for transferring, storing, or treating hazardous waste.	Cal. Code Regs. tit. 22, § 66264.192(a), (b), (c), (e), (f), and (g)				Not a potential ARAR. No tank system is proposed.
Use of tanks or piping	Requirements for secondary containment of tank systems.	Tank systems for transferring, storing, or treating hazardous waste.	Cal. Code Regs. tit. 22, § 66264.193(b), (c), (d), and (e)				Not a potential ARAR. No tank system is proposed
Use of tanks or piping	Requirements for secondary containment of ancillary equipment.	Tank systems for transferring, storing, or treating hazardous waste.	Cal. Code Regs. tit. 22, § 66264.193(f)				Not a potential ARAR. No tank system is proposed
Use of tank systems	Requirements for operation of tank systems including spill prevention and prohibitions of material that could cause failure.	Tank systems for transferring, storing, or treating hazardous waste.	Cal. Code Regs. tit. 22, § 66264.194(a) and (b)				Not a potential ARAR. No tank system is proposed

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Use of tank systems	Requirements for inspection of tank systems including inspection of overflow protection, corrosion, release, detection equipment, and cathodic protection.	Tank systems for transferring, storing, or treating hazardous waste.	Cal. Code Regs. tit. 22, § 66264.195(a), (b), and (c)				Not a potential ARAR. No tank system is proposed
Use of tank systems	Requirements for response to leaks and spills from tank systems including removal of system from use if appropriate, containment, cleanup, emergency procedures, etc.	Tank systems for transferring, storing, or treating hazardous waste.	Cal. Code Regs. tit. 22, § 66264.196(b) except (b)(5) and (b)(7)				Not a potential ARAR. No tank system is proposed
Use of tank systems	Requirements for closure and postclosure care of tank systems decontamination, clean closure and leaving waste in place at closure.	Tank systems for transferring, storing, or treating hazardous waste.	Cal. Code Regs. tit. 22, § 66264.197(a) and (b)				Not a potential ARAR. No tank system is proposed.
Placement of waste in land disposal units	Movement of excavated materials to new location and placement in or on land will trigger LDRs for the excavated waste or closure requirements for the unit in which the waste is being placed.	Materials containing RCRA hazardous wastes subject to LDRs are placed in another unit.	Cal. Code Regs. tit. 22, § 66268.40	3			Potentially applicable for removal and off-site disposal alternatives if wastes determined to be RCRA wastes after generation and testing.
Placement of waste in land disposal units	Treatment of waste subject to ban on land disposal must attain levels achievable by BDAT for each hazardous constituent in each listed waste, if residual is to be land disposed.	Placement of RCRA hazardous waste in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, or underground mine or cave.	Cal. Code Regs. tit. 22, § 66268.42	3			Potentially applicable for removal and off-site disposal alternatives if wastes determined to be RCRA wastes after generation and testing.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				ARAR Determination			
Action	Requirement	Prerequisite	Citation	A	RA	TBC	Comments
Placement of waste in land disposal units	BDAT standards for spent solvent wastes and dioxin-containing wastes are based on one of four technologies or combinations: for wastewaters, (1) steam stripping, (2) biological treatment, or (3) carbon absorption; and for all other wastes, (4) incineration. Any technology may be used, however, if it will achieve the concentration levels specified.	Solvent or dioxin-containing wastes.	Cal. Code Regs. tit. 22, § 66268.30, § 66268.31	3			Potentially applicable for removal and off-site disposal alternative, which would include disposal of landfill solvent-containing waste.
Clean closure	Remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste. If waste is left on site, closure and postclosure care requirements are necessary.	Surface impoundments, container or tank liners, and hazardous waste residues or contaminated soil (including soil from dredging or soil disturbed in the course of drilling or excavation) returned to land. Not applicable to material treated, stored, or disposed only before the effective date of the requirements, or if treated <i>in situ</i> or consolidated within the area of contamination.	Cal. Code Regs. tit. 22, § 66264.228(a), (b), (e)–(k), (m), (o)–(q) except as it cross-references procedural requirements such as closure plans and annual reports.	2,3			Potentially applicable for off-site removal alternative for the Containment Area. Also applicable for substantive closure requirements for capping alternatives.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Waste pile	Use a single liner and leachate collection system. Waste put into waste pile is subject to land ban regulations.	RCRA hazardous waste, noncontainerized accumulation of solid, nonflammable hazardous waste that is used for treatment or storage.	Cal. Code Regs. tit. 22, § 66264.251 (except 251[j], 251[e][11])				Not an ARAR. Wastes are not planned to be managed as waste piles as part of this action.
CAMU	An area at a RCRA facility may be designated as a CAMU. Placement of remediation wastes into or within a CAMU does not constitute land disposal of hazardous wastes nor creation of a unit subject to minimum technology requirements or LDRs.	RCRA CAMU.	Cal. Code Regs. tit. 22, § 66264.552(c) and (e)	2, U2,3, 4, W 2-5			Potential ARAR for consolidation of materials into the H1 Containment Area.
Incineration	Waste analysis, pretreatment, operating, and monitoring requirements and performance standards for hazardous waste incinerators.	Facility that incinerates hazardous wastes.	Cal. Code Regs. tit. 22, § 66264.341, 66264.342, 66264.343, 66264.345, and 66264.347				Not an ARAR. Incineration is not proposed as an alternative.
Thermal treatment	Establishes requirements for owners and operators of interim status facilities that thermally treat hazardous waste in devices other than those that use flame combustion.	RCRA hazardous waste treatment.	Cal. Code Regs. tit. 22, § 66265.370–66265.383				Not an ARAR. Thermal treatment is not proposed in any alternative.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Incineration	Owner or operator shall remove all hazardous waste and waste residues from the incinerator site and manage residues as hazardous waste unless they are demonstrated not to be hazardous waste.	Facility that incinerates hazardous waste.	Cal. Code Regs. tit. 22, § 66264.351				Not an ARAR. Incineration is not proposed as an alternative.
Use of equipment that contacts hazardous waste with organic concentrations greater than 10 percent by weight	Air emission standards for process vents or equipment leaks.	Equipment that contains or contacts hazardous waste with organic concentrations of at least 10 percent by weight or process vents associated with specified operations that manage hazardous wastes with organic concentrations of at least 10 ppm <sub>w</sub> .	Cal. Code Regs. tit. 22, § 66264.1030–1034 (excluding 1030[c], 1033[j], 1034[c][2], 1034[d][2]); 66264.1050–1063 (excluding 1050[c], 1050[d], 1057[g][2], 1061[d], 1063[d][3])				Not an ARAR. No hazardous wastes are present with organic concentrations greater than 10 percent. No processing of wastes are proposed.
Treatment in a miscellaneous unit	Design and operating standards for unit in which hazardous waste is treated.	Treatment of hazardous waste in a unit.	Cal. Code Regs. tit. 22, § 66264.601				Not an ARAR. No treatment is proposed in any alternative.



**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Point of compliance	The POC is a vertical surface, located at the hydraulically downgradient limit of the waste management area that extends through the uppermost aquifer underlying the regulated unit.	Hazardous waste treatment, storage, or disposal facility.	Cal. Code Regs. tit. 22, § 66265.95	1, 2			A potential ARAR for the Containment Area where the POC is the defined downgradient of the Containment Barrier for the RCRA-regulated unit within the Containment Area.
Monitoring	Requirements for monitoring groundwater, surface water, and the vadose zone.	Hazardous waste treatment, storage, or disposal facility.	Cal. Code Regs. tit. 22, § 66265.97 (a)	1, 2			Applicable to the RCRA-regulated unit within the Containment Area.
Monitoring	Requirements for a detection monitoring program.	Hazardous waste treatment, storage, or disposal facility.	Cal. Code Regs. tit. 22, § 66265.98(b), (c), (f), (g), and (i)	1, 2			Applicable to the RCRA-regulated unit within the Containment Area.
Monitoring	Requirements for an evaluation monitoring program.	Hazardous waste treatment, storage, or disposal facility.	Cal. Code Regs. tit. 22, § 66264.99(b), (c), (e), (f), and (g)	1, 2			Applicable to the RCRA-regulated units within the Containment Area.
Corrective action	The owner or operator required to take corrective action under Cal. Code Regs. tit. 22, § 66264.91 shall take corrective action to remediate releases from the regulated unit and to ensure that the regulated unit achieves compliance with the water quality protection standard.	Hazardous waste treatment, storage, or disposal facility.	Cal. Code Regs. tit. 22, § 66265.100(b)	1, 2			Applicable to the RCRA-regulated unit within the Containment Area.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Corrective action	The owner or operator shall implement corrective action measures that ensure that constituents of concern achieve their respective concentration limits at all monitoring points and throughout the zone affected by the release, including any portions of the affected zone that extend beyond the facility boundary, by removing the waste constituents or treating them in place. The owner or operator shall take other action to prevent noncompliance due to a continued or subsequent release including, but not limited to, source control.	Hazardous waste treatment, storage, or disposal facility.	Cal. Code Regs. tit. 22, § 66265.100(c)				Not an ARAR for alternative 2 as no waste removal or treatment will be conducted.  Not an ARAR for alternative 3 as no groundwater monitoring will be conducted.
Monitoring	The owner or operator shall establish and implement, in conjunction with the corrective action measures, a water quality monitoring program that will demonstrate the effectiveness of the corrective action program and be effective in determining compliance with the water quality protection standard and in determining the success of the corrective action measures under subsection (c) of this section.	Hazardous waste treatment, storage, or disposal facility.	Cal. Code Regs. tit. 22, § 66265.100(d)	1 2 3			Applicable for the interim status RCRA-regulated units.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Completion of response action	The corrective action program is complete when compliance with the water quality standard is demonstrated based on the results of sampling and analysis for all constituents of concern for a period of 1 year.	Hazardous waste treatment, storage, or disposal facility.	Cal. Code Regs. tit. 22, § 66265.100(g)(1)	2			Applicable for the interim status RCRA regulated units.
<b>Military Munitions Rule (40 C.F.R. pt. 266 subpt. M)*</b>							
Military munitions	Standards for transportation and storage of solid waste military munitions and treatment and disposal of waste military munitions.	Management of military munitions.	40 C.F.R. § 266.203, 266.205, and 266.206		3 U2 U3 U4,U5 W2,3 W4,5		This could be RA for all removal activities. Any intrusive activities at MI are performed under the UXO personnel supervision in anticipation of encountering OE. However, no live munitions have been found in these areas during recent intrusive activities such as installation of the slurry wall and extraction trench.
<b>Clean Water Act, as Amended (33 U.S.C., ch. 26, §§ 1251–1387)*</b>							
Discharge to surface waters	Owners and operators of construction activities must be in compliance with discharge standards.		CWA Section 402 (33 U.S.C. ch. 26, § 1342)	2, 3 U2,,3 U3,,4 U5 W2,3 W4,5			Construction activities will be managed to meet standards regarding discharge to surface waters.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
	All direct dischargers meet technology-based requirements including the best control technology and the best available technology economically achievable.		CWA Section 301(b) (33 U.S.C. ch. 26, § 1311)		2, 3 U2,U3 U3, U4U5, W2,3, W4,5		Potentially ARARs for construction activities that will be managed to meet standards regarding discharge to surface waters.
Discharge of dredged material	Guidelines for specification of disposal sites for dredged material. The discharge must represent the least damaging, practicable alternative. The discharge of dredged material must not result in significant degradation of the aquatic ecosystem. All practicable means must be utilized to minimize adverse environmental impacts.	Discharge of dredged material to waters of the United States.	40 C.F.R. § 230.10(a), (c), and (d)				Not an ARAR. Discharge of dredged materials to water is not proposed in any alternative.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>Safe Drinking Water Act (42 U.S.C. § 300[f]–300[j]-26)*</b>							
Injection	The UIC program prohibits injection activities that allow movement of contaminants into underground sources of drinking water that may result in violations of MCLs or adversely affect health.	An approved UIC program is required in states listed under SDWA Section 1422. Class I wells and Class IV wells are the relevant classifications for CERCLA sites. Class I wells are used to inject hazardous waste beneath the lowermost formation that contains a USDW within 0.25 mile of the well.	40 C.F.R. § 144.12, excluding the reporting requirements in § 144.12(b) and 144.12(c)(1)				Not an ARAR. No injection of treated groundwater is proposed.
<b>Toxic Substances Control Act (15 U.S.C. §§ 2601–2692)*</b>							
Marking of PCBs	The following must be marked as designated in 40 C.F.R. § 761.45: PCB containers containing greater than 50 ppm PCBs, PCB articles (see 40 C.F.R. § 761.45), PCB article containers, storage areas used to store PCBs, and PCB items for disposal.  All marks must be on the exterior of PCB container and must be clearly visible.	PCB article described in 40 C.F.R. § 761.45.	40 C.F.R. § 761.40	3			Applicable only if off-site disposal is the chosen alternative and containers are found or generated and test results show greater than 50 ppm PCB content.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Disposal of PCBs	Provides expanded decontamination procedures and disposal options for PCBs. Ensures consistency with RCRA land disposal restriction.	Remedial actions involving PCBs.	40 C.F.R. § 761.50	3			Applicable only if off-site disposal alternatives are chosen and regulated levels of PCBs are removed.
	Nonliquid PCBs at concentrations of 50 ppm or greater in the form of contaminated soil, rags, or other debris shall be disposed in a TSCA-approved incinerator or in a TSCA-approved chemical waste landfill or by a TSCA-approved alternative disposal method.		40 C.F.R. § 761.60(e)	3			Applicable only if off-site disposal alternatives are chosen and regulated levels of PCBs are removed. Testing at the time of generation will determine the appropriate disposition.
Disposal of PCBs	All PCB articles or containers must be removed and disposed within 1 year of storage.	PCB concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater.	40 C.F.R. § 761.65(a)	3			Applicable only if off-site disposal alternatives are chosen and RCRA levels of PCBs are removed.
PCB storage on-site prior to disposal	Storage facilities must be constructed with adequate roof and walls; with a floor and curb of impervious materials; without drain valves, floor drains, expansion joints, sewer lines, or other openings; and above the 100-year floodwater level.	PCB concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater.	40 C.F.R. 761.65(b)				Not an ARAR. No storage of any waste including PCBs is proposed.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
	Temporary storage (30 days or less) need not comply with above storage regulations for the following items: PCB articles and equipment that are nonleaking; leaking articles and equipment placed in nonleaking containers; PCB containers containing nonliquid PCBs, such as soil, rags, and debris; or liquid PCBs between 50 to 500 ppm if covered by spill prevention, control, and countermeasure plan.	Temporary storage of PCB concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater.	40 C.F.R. § 761.65(c), except § 761.65(c)(9)	3			Applicable only if off-site disposal alternatives are chosen and regulated levels of PCBs are removed. Testing at the time of generation will determine the appropriate disposition
PCB storage on-site prior to disposal	All storage areas must be properly marked.	PCB concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater.	40 C.F.R. § 761.65(c)(3)				Not an ARAR. No storage of any waste including PCBs is proposed.
PCB storage on-site prior to disposal	No item of movable equipment used to handle PCBs that comes in contact with PCBs shall be moved from the storage area unless it has been decontaminated as specified in 40 C.F.R. § 761.79.	PCB concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater.	40 C.F.R. § 761.65(c)(4)	3			Applicable only if off-site disposal alternatives are chosen and regulated levels of PCBs are removed. Testing at the time of generation will determine the appropriate disposition

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
PCB storage on-site prior to disposal	All stored articles must be checked for leaks every 30 days.	PCB concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater.	40 C.F.R. § 761.65(c)(7)	3			Applicable only if off-site disposal alternatives are chosen and regulated levels of PCBs are removed. Testing at the time of generation will determine the appropriate disposition
PCB storage on-site prior to disposal	Containers must be dated when they are placed in storage.	PCB concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater.	40 C.F.R. § 761.65(c)(8)	3			Applicable only if off-site disposal alternatives are chosen and regulated levels of PCBs are removed. Testing at the time of generation will determine the appropriate disposition
Cleanup of PCB spills	Cleanup of PCBs to different levels depending upon spill location, potential exposure to residual PCBs after cleanup, concentrations originally spilled, and the nature and size of the population potentially exposed.	Spills of PCBs that occur after 04 May 1987 and result from release of materials containing PCBs at concentrations of 50 ppm or greater.	40 C.F.R. § 761.120; 761.123; 761.125 except 125(a)(1), 125(b)(3), and record-keeping requirements in 125(c) such as 125(c)(1)(iii), 125(c)(5); 761.130; 761.135		3		Applicable only if off-site disposal alternatives are chosen and RCRA levels of PCBs are removed. PCB contamination is not necessarily the result of spills at IA H1.



**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b>							
<b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b>							
<b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Cleanup of PCB spills	Additional cleanup may be required to prevent unreasonable risk to human health and the environment.	Spills at sites warranting additional cleanup due to human-health risk, shallow groundwater, or other factors.	40 C.F.R. § 761.120(b)				Not an ARAR.  No off-site disposal is proposed for outside the Containment Area.
Cleanup of PCB spills	For low-concentration spills (less than 500 ppm PCBs), solid surfaces should be double-washed/rinsed and all soil within the spill area, plus a 1-foot buffer, should be excavated, and the ground restored to its original configuration by backfilling with clean soil (containing less than 1 ppm PCBs).	Low-concentration spill that involves less than 1 pound PCBs by weight.	40 C.F.R. § 761.125(b)(1)		3		Applicable only if off-site disposal alternatives are chosen and regulated levels of PCBs are removed. Testing at the time of generation will determine the appropriate disposition. PCB contamination is not necessarily the result of spills at IA H1.
<b>Clean Air Act (42 U.S.C. §§ 7401–7671)*</b>							
Discharge to air	Provisions of SIP approved by U.S. EPA under Section 110 of CAA.	Major sources of air pollutants.	40 U.S.C. § 7410; portions of 40 C.F.R. § 52.220				Not an ARAR. No treatment is proposed in any alternative that would qualify as a major source of air pollutants.
Discharge to air	NAAQS – primary and secondary standards for ambient air quality to protect public health and welfare (including standards for particulate matter and lead).	Contamination of air affecting public health and welfare.	40 C.F.R. § 50.4–50.12				Not an ARAR. Federal NAAQS are nonenforceable standards.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Discharge of any nonattainment air contaminant or any halogenated hydrocarbons	All new sources of air pollution that may result in a net emission increase of any nonattainment air contaminant or any halogenated hydrocarbons are to employ BACT.	Net emissions increase of any nonattainment air contaminant or any halogenated hydrocarbons.	BAAQMD Rule 6				Not an ARAR. No new sources of air pollutants are proposed in any alternatives.
Air stripping or soil vapor extraction	Any air stripping and soil vapor extraction operations that emit benzene, vinyl chloride, perchloroethylene, methylene chloride, and/or trichloroethylene shall be vented to a control device that reduces emissions to the atmosphere by at least 90 percent by weight.		BAAQMD Regulation 8-47-301				Not an ARAR. No air stripping or soil vapor extraction operations are proposed in any alternative.
Air stripping or soil vapor extraction	Any air stripping and soil vapor extraction operations with a total organic compound emission greater than 15 pounds per day shall be vented to a control device that reduces the total organic compound emission to the atmosphere by at least 90 percent by weight.		BAAQMD Regulation 8-47-302				Not an ARAR. No air stripping or soil vapor extraction operations are proposed in any alternative.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>Federal Hazardous Materials Transportation Law (49 U.S.C. §§ 5101–5127)*</b>							
Transportation of hazardous material	No person shall represent that a container or package is safe unless it meets the requirements of 49 U.S.C. §§ 5101–5127.	Interstate carriers transporting hazardous waste and substances by motor vehicle. Transportation of hazardous material under contract with any department of the executive branch of the federal government.	49 C.F.R. § 171.2(f)		3		Potentially relevant and appropriate if removal and off-site disposal alternatives are selected.
	No person shall unlawfully alter or deface labels, placards or descriptions, packages, containers, or motor vehicles used for transportation of hazardous materials.		49 C.F.R. § 171.2(g)		3		Potentially relevant and appropriate if removal and off-site disposal alternatives are selected.
Hazardous materials marking, labeling, and placarding	Each person who offers hazardous material for transportation or each carrier that transports it shall mark each package, container, and vehicle in the manner required.	Person who offers hazardous material for transportation; carries hazardous material; or packages, labels, or placards hazardous material.	49 C.F.R. § 172.300		3		Potentially relevant and appropriate if removal and off-site disposal alternatives are selected.
	Each person offering nonbulk hazardous materials for transportation shall mark the proper shipping name and identification number (technical name) and consignee's name and address.		49 C.F.R. § 172.301		3		Potentially relevant and appropriate if removal and off-site disposal alternatives are selected.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

**Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal**

**Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment**

**Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1**

				ARAR Determination			
Action	Requirement	Prerequisite	Citation	A	RA	TBC	Comments
Hazardous materials marking, labeling, and placarding	Hazardous materials for transportation in bulk packages must be labeled with proper ID number, specified in 49 C.F.R. § 172.101 table, with required size of print. Packages must remain marked until cleaned or refilled with material requiring other marking.		49 C.F.R. § 172.302		3		Potentially relevant and appropriate if removal and off-site disposal alternatives are selected.
Hazardous materials marking, labeling, and placarding	No package marked with a proper shipping name or ID number may be offered for transport or transported unless the package contains the identified hazardous material or its residue.		49 C.F.R. § 172.303		3		Potentially relevant and appropriate if removal and off-site disposal alternatives are selected
Hazardous materials marking, labeling, and placarding	The markings must be durable, in English, in contrasting colors, unobscured, and away from other markings.		49 C.F.R. § 172.304		3		Potentially relevant and appropriate if removal and off-site disposal alternatives are selected
Hazardous materials marking, labeling, and placarding	Nonbulk combination packages containing liquid hazardous materials must be packed with closures upward, and marked with arrows pointing upward.		49 C.F.R. § 172.312		3		Potentially relevant and appropriate if removal and off-site disposal alternatives are selected.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2—Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2—Hot-spot removal, Alternative U3—Limited hot spot removal, Alternative U4—Removal and off-site disposal</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2—Hot spot removal, Alternative W3—Removal and off-site disposal</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Hazardous materials marking, labeling, and placarding	Labeling of hazardous material packages shall be as specified in the list.		49 C.F.R. § 172.400		3		Potentially relevant and appropriate if removal and off-site disposal alternatives are selected and wastes test as hazardous.
Hazardous materials marking, labeling, and placarding	Each bulk packaging or transport vehicle containing any quantity of hazardous material must be placarded on each side and each end with the type of placards listed in Tables 1 and 2 of 49 C.F.R. § 172.504.	Each person who offers for transport or transports any hazardous materials shall comply with these placarding requirements.	49 C.F.R. § 172.504		3		Potentially relevant and appropriate if removal and off-site disposal alternatives are selected.
Solid waste disposal facility	A facility or practice shall not: contaminate an underground drinking water source beyond the solid waste boundary or a court- or state-established alternative; cause a discharge of pollutants into waters of the United States that is in violation of the substantive requirements of the NPDES under CWA Section 402, as amended; cause a discharge of dredged material or fill material to waters of the United States that is in violation of the substantive requirements of CWA Section 404; or cause nonpoint source pollution of waters of the United States that violates applicable legal substantive requirements	Solid waste disposal facility and practices except agricultural wastes, overburden resulting from mining operations, land application of domestic sewage, location and operations of septic tanks, solid or dissolved materials in irrigation return flows, industrial discharges that are point sources subject to permits under CWA, source special nuclear or by-	40 C.F.R. § 257.3–257.4 and Appendix I				Not an ARAR. This action does not involve disposal at an on-site solid waste disposal facility.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				ARAR Determination			
Action	Requirement	Prerequisite	Citation	A	RA	TBC	Comments
Solid waste disposal facility	implementing an areawide or statewide water quality management plan approved by the Administrator under CWA Section 208, as amended.	product material as defined by the Atomic Energy Act, hazardous waste disposal facilities that are subject to regulation under RCRA subtitle C, disposal of solid waste by underground well injection, and municipal solid waste landfill units.					
<b>CERCLA Off-Site Rule (40CFR 300.440)</b>							
Disposal of CERCLA wastes off-site	CERCLA wastes may only be placed in a facility operating in compliance with the Resource Conservation and Recovery Act (RCRA) or other applicable Federal or State requirements. That section further prohibits the transfer of CERCLA wastes to a land disposal facility that is releasing contaminants into the environment, and requires that any releases from other waste management units must be controlled..	CERCLA cleanup waste Off–Site Disposal.	40 CFR § 300.440	3			Potentially applicable if removal and off-site disposal alternative is selected.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b>							
<b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b>							
<b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>California Civil Code</b>							
Land-use controls	Provides conditions under which land-use restrictions will apply to successive owners of land.		Cal. Civ. Code § 1471		All		DON is not scheduled to transfer IA H1 to another party. Potential ARAR where the DON is transferring property to a nonfederal agency. Substantive provisions are the following general narrative standard: “to do or refrain from doing some act on his or her own land where (c) Each such act relates to the use of land and each such act is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence of hazardous materials, as defined in Section 25260 of the California Health and Safety Code.” This narrative standard would be implemented through incorporation of restrictive covenants in the deed at the time of transfer.
Land-use controls	Allows DTSC to enter into an agreement with the owner of a hazardous waste facility to restrict present and future land uses.		Cal. Health & Safety Code § 25202.5		All		Potential ARAR for future transfers. The substantive provisions of Cal. Health & Safety Code § 25202.5 are the general narrative standards to restrict “present and future uses of all or part of the land on which the facility is located”.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b>							
<b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b>							
<b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>California Fish and Game Code</b>							
	Projects within the state shall not jeopardize the existence of any endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with preserving the species or its habitat that would prevent jeopardy.		Cal. Fish & Game Code § 1900, 1908, 2053, and 2080	2,3 W2,3 ,4,5			IA H1 provides habitat and supports the salt marsh harvest mouse. Remedial actions to be taken will be mitigated and are not expected to have any long-term impacts on threatened or endangered species. The mitigation will result in increased quantity and quality of habitat.
	Prohibits the taking of birds and mammals, including the taking by poison.		Cal. Fish & Game Code § 3005(a)		All		Procedural aspects are not ARARs; certain substantive provisions pertaining to take of birds or mammals with a poisonous substance are applicable. The selected remedy will prevent “take” of birds and mammals by containing contaminants and severing the pathway of exposure to contaminated soil or removing contaminants below harmful levels.



**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b>							
<b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b>							
<b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021, and 43030</b>							
Site Security	The site shall be designed to discourage unauthorized access by persons or vehicles by using a perimeter barrier or topographic constraints. Areas within the site where open storage or ponding of hazardous materials occurs shall be separately fenced.		Cal. Code Regs. tit. 27, § 20530, Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20530	2,3			Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.
Roads	Landfill roads must minimize dust and tracking of materials onto public roads. Such roads shall be kept in safe condition and maintained such that vehicle access and unloading can be conducted during inclement weather.		Cal. Code Regs. tit. 27, § 20540, Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20540		2,3		Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.
Confined Unloading	Unloading of solid wastes shall be confined to as small an area as possible without resulting in traffic, personnel or public safety hazards. Requires normal deposition of waste at toe of fill.		Cal. Code Regs. tit. 27, § 20630, Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20630		2,3		Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.
Spreading and Compacting	Requires spreading and compacting of refuse in layers.		Cal. Code Regs. tit. 27, § 20640, Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20640		2,3		Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			<b>Comments</b>
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	
Nuisance Control	Each site shall be operated and maintained so as not to create a public nuisance.		Cal. Code Regs. tit. 27, § 20760, Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20760		2,3		Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.
Burning Wastes	Burning wastes shall be extinguished.		Cal. Code Regs. tit. 27, § 20780(b), Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 4, Sec. 20780(b)		2,3		Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.
Dust Control	The operator shall take adequate measures to minimize the creation of dust and prevent safety hazards due to obscured visibility.		Cal. Code Regs. tit. 27, § 20800, Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 4, Sec. 20800		2,3		Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.
Vector and Bird Control	The operator shall take adequate measures to control or prevent the propagation, harborage, or attraction of flies, rodents, or other vectors, and to minimize bird problems.		Cal. Code Regs. tit. 27, § 20810, Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 4, Sec. 20810		2,3		Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			<b>Comments</b>
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	
Drainage and Erosion Control	The drainage system shall be designed and maintained to: ensure integrity of roads, structures, and gas monitoring and control systems; prevent safety hazards; and prevent exposure of waste.		Cal. Code Regs. tit. 27, § 20820, Div. 2, Subdiv 1, Ch. 3, Subch. 4, Art. 4, Sec. 20820		2,3		Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.
Litter Control	Litter and loose materials shall be routinely collected and disposed of properly.		Cal. Code Regs. tit. 27, § 20830, Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 4, Sec. 20830		2,3		Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.
Gas Control	The operator shall cause the site to be monitored for the presence and movement of landfill gas and take any necessary action to control such gases in the event that the gas causes a hazard or nuisance.		Cal. Code Regs. tit. 27, § 20919, Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 6, Sec. 20919		2,3		Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.
Emergency Response	Potential emergency conditions that may exceed the design of the site and could endanger the public health or environment must be anticipated. Response procedures for these conditions must be addressed in the RD/RA plans.		Cal. Code Regs. tit. 27, § 21130, Ch. 3, Subch. 5, Art. 2		2,3		Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of Cal. Code Regs. tit. 27, Ch. 3, Subch. 5, Art. 2. Scope & Applicability pursuant to Cal. Code Regs. tit. 27, § 2110.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Site Security	All points of access to the site must be restricted, except permitted entry points. All monitoring, control, and recovery systems shall be protected from unauthorized access.		Cal. Code Regs. tit. 27, § 21135, Ch. 3, Subch. 5, Art. 2		2,3		Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of Cal. Code Regs. tit. 27.
Final Cover	The final cover shall function with minimum maintenance and provide waste containment to protect public health and safety by controlling at a minimum, vectors, fire, odor, litter, and landfill gas migration. The final cover shall also be compatible with post closure land use.		Cal. Code Regs. tit. 27, § 21140, Ch. 3, Subch. 5, Art. 2		2,3		Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of Cal. Code Regs. tit. 27.
Drainage and Erosion Control	The drainage and erosion control system shall be designed and maintained to ensure integrity of postclosure land uses, roads, and structures; to prevent public contact with waste and leachate; to ensure integrity of gas monitoring and control systems; to prevent safety hazards; and to prevent exposure of waste.		Cal. Code Regs. tit. 27, § 21150, Ch. 3, Subch. 5, Art. 2		2,3		Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of Cal. Code Regs. tit. 27.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			<b>Comments</b>
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	
Landfill Gas Control and Leachate Contact	Landfill gas control shall be implemented and maintained; leachate must be collected and controlled in a manner which prevents public contact and controls vectors, nuisance and odor.		Cal. Code Regs. tit. 27, § 21160, Ch. 3, Subch. 5, Art. 2		2,3		Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of Cal. Code Regs. tit. 27, Ch. 3, Subch. 5, Art. 2. Scope & Applicability pursuant to Cal. Code Regs. tit. 27 § 2110. The state does not intend that subsurface leachate monitoring and collecting systems need to be added to existing landfills unless leachate production and/or accumulation is evident.
Gas Monitoring and Control During Closure and Postclosure	To protect public health and safety and the environment, landfill gases generated at a disposal site will be controlled to ensure that: 1) concentrations of methane gas do not exceed 1.25% by volume in air within on-site structures, 2) concentrations of methane do not exceed 5% by volume in air at the property or designated landfill boundary and 3) trace gases do not pose an acute or chronic exposure to toxic or carcinogenic compounds.		Cal. Code Regs. tit. 27, § 20921-20937, Ch. 3, Subch. 4, Art. 6		2,3		Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of Cal. Code Regs. tit. 27.
Postclosure Maintenance	The landfill must be maintained and monitored for no less than 30 years following closure.		Cal. Code Regs. tit. 27, § 21180, Ch. 3, Subch. 5, Art. 2		2,3		Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of Cal. Code Regs. tit. 27.

**Table A-5(continued)  
Potential Federal Action-Specific ARARs**

**Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal**

**Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment**

**Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1**

				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>Bay Area Air Quality Management District (BAAQMD)</b>							
	This regulation specifies landfill gas collection and emission control system requirements including construction standards, administrative requirements, monitoring and record keeping requirements, and operation procedures.		BAAQMD, Regulation 8 - Organic Compound, Rule 34 – Solid Waste Disposal Sites		2,3		Applicable to the control of landfill emissions from a stationary source if the amount of emissions meets the regulatory requirements.
	This rule requires that a person shall not discharge into the atmosphere from any miscellaneous operation an emission containing more than 6.8 kilograms (15 pounds) per day and containing a concentration of more than 300 parts per million of total carbon on a dry basis.		BAAQMD, Regulation 8 - Organic Compound, Rule 2 – Miscellaneous Operations		2,3		Total carbon in an emission is the sum of the total carbon of all of the individual organic compounds present in the effluent. However, 1,1,1-trichloroethane, methylene chloride, methane and chlorofluorocarbons shall not be included in the calculation of total carbon.

Note:

- \* Statutes and policies, and their citations, are provided as headings to identify general categories of potential ARARs for the convenience of the reader. Listing the statutes and policies does not indicate that the DON accepts the entire statutes or policies as potential ARARs; specific potential ARARs are addressed in the table below each general heading; only substantive requirements of specific citations are considered potential ARARs.

**Table A-5(continued)**  
**Potential Federal Action-Specific ARARs**

Acronyms/Abbreviations:

A – applicable	PCB – polychlorinated biphenyl
ARAR – applicable or relevant and appropriate requirement	PM <sub>10</sub> – particulate matter, less than 10 micrometers in diameter
BAAQMD – Bay Area Air Quality Management District	POC – point of compliance
BACT – best available control technology	ppm – parts per million
BDAT – best demonstrated available technology	ppm <sub>w</sub> – parts per million by weight
CAA – Clean Air Act	pt. – part
Cal. Code Regs. – <i>California Code of Regulations</i>	Pub. L. No. – public law number
CAMU – corrective action management unit	RA – relevant and appropriate
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act	RAO – remedial action objective
C.F.R. – <i>Code of Federal Regulations</i>	RCRA – Resource Conservation and Recovery Act
ch. – chapter	RI – remedial investigation
CWA – Clean Water Act	§ – section
DON – Department of the Navy	SCAQMD – South Coast Air Quality Management District
EE/CA – Engineering Evaluation/Cost Analysis	SDAPCD – San Diego Air Pollution Control District
°F – degrees Fahrenheit	SDWA – Safe Drinking Water Act
FS – feasibility study	SIP – State Implementation Plan
IR – Installation Restoration (Program)	subpt. – subpart
kg/day – kilograms per day	TBC – to be considered
LAER – lowest achievable emission rate	TCE – trichloroethene
LDR – land disposal restriction	tit. – title
MCAS – Marine Corps Air Station	TSCA – Toxic Substances Control Act
MCL – maximum contaminant level	UIC – underground injection control
mg/dscm – milligrams per dry standard cubic meter	U.S. – United States
NAAQS – National Ambient Air Quality Standards (primary and secondary)	U.S.C. – <i>United States Code</i>
NPDES – National Pollutant Discharge Elimination System	USDW – underground source of drinking water
OU – operable unit	U.S. EPA – United States Environmental Protection Agency
	VOC – volatile organic compound

**Table A-6  
Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b>							
<b>Upland Areas: Alternative: U1—No Action, Alternative U2,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b>							
<b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>State Water Resources Control Board and Regional Water Quality Control Board*</b>							
Discharges to high-quality waters	Incorporated into all Regional Board Basin Plans. Requires that quality of waters of the state that is better than needed to protect all beneficial uses be maintained unless certain findings are made. Discharges to high quality waters must be treated using best practicable treatment or control necessary to prevent pollution or nuisance and to maintain the highest quality water. Requires cleanup to background water quality or to lowest concentrations technically and economically feasible to achieve. Beneficial uses must, at least, be protected.		SWRCB Res. 68-16 (Policy With Respect to Maintaining High Quality of Waters in California) (Cal. Water Code § 13140, CWA regulations 40 C.F.R. § 131.12)				Not an ARAR. There are no discharges to high quality waters at IA H1. There are no drinking water sources at IA H1.
Closure of waste management unit	Prior to closure, inactive waste management units must comply with the substantive requirements for eliminating most nonstormwater discharges, developing and implementing a stormwater pollution prevention plan, and performing monitoring of stormwater discharges.		SWRCB Order No. 91-13-DWQ, as amended by Order No. 92-12-DWQ (General Industrial Storm Water Permit)			2A 2B 3	Substantive requirements may be considered for stormwater issues during remediation.



**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>State Water Resources Control Board and Regional Water Quality Control Board*</b>							
Closure of waste management unit (continued)	Waste management units that are going through final closure, with 5 acres of disturbance or more, must comply with the substantive requirements for eliminating most nonstormwater discharges, developing and implementing a stormwater pollution prevention plan, and performing monitoring to stormwater discharges.		SWRCB Order No. 92-08-DWQ (General Construction Activity Storm Water Permit)	2 3			Substantive requirements should be complied with for all actions that involve soil-moving.
Discharge to surface waters	Establishes numerical water quality objectives for the protection of human health and freshwater aquatic life for a large number of toxic pollutants. It also establishes narrative objectives and toxicity objectives. It provides a program of implementation and specifies proposals to adopt numerical standards for water bodies that are dominated by reclaimed water and agricultural drainage.	Discharge to surface waters, enclosed bays, and estuaries.	Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. (Phase 1 of the Inland Surface Waters Plan and the Enclosed Bays and Estuaries Plan)		U1 U2 U3 U4 W2 W3 W4 W5		Substantive provisions are potential ARARs for determining whether effluent limitations are required and for the method for calculating the effluent limits.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

The State has not yet responded to our request for ARARs

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Discharge to surface waters (continued)	Establishes prohibitions on discharges to cold interstate waters and maximum temperature changes to other waters to protect natural receiving water temperatures; includes site-specific temperature objectives for certain water bodies.	Discharge to surface waters, enclosed bays, and estuaries.	Cal. Water Code § 13140, 13142.5 (Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California)				Not an ARAR. There are no sources of thermal discharge at IA H1.
<b>California Environmental Quality Act*</b>							
Actions by state	Requires analysis of environmental impacts of response actions, comparison of alternative actions, and implementation of appropriate mitigation measures. No hazardous substances may remain on-site unless further mitigation is not feasible.	State actions.	CEQA, California Pub. Res. Code § 21100–21178, 15000, and 15002		All		Not an ARAR. Requirements of CEQA are applicable to state actions and not those of the federal government. The CERCLA process fulfills these requirements. However, the lead regulatory agency for this site is the State of California DTSC. DTSC's action of approving the final ROD is a CEQA applicable State action.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b>							
<b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b>							
<b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>California Underground Storage Tank Program*</b>							
Corrective action for aboveground tanks	Regulates use and discharges from aboveground petroleum tanks, including testing and corrective action requirements.	Aboveground petroleum tank.	Cal. Health & Safety Code, div. 20, ch. 6.6.7, § 25270–25270.13 (Aboveground Petroleum Storage Act)				Not an ARAR. No actions related to aboveground petroleum storage tanks are planned as part of this action.
Action at solid waste disposal site	Authorizes the RWQCB to implement the SWAT program with respect to water quality. The purpose of the SWAT program is to identify solid waste disposal sites that may be leaking hazardous wastes and threatening water quality.	Solid waste disposal site.	Cal. Water Code § 13273 (SWAT program)				Not an ARAR. No actions related to aboveground petroleum storage tanks are planned as part of this action.
<b>Toxic Pits Cleanup Act*</b>							
Action at surface impoundment	Authorizes the RWQCB to regulate surface impoundments containing hazardous waste, as defined in Cal. Code Regs. tit. 22. Prohibits discharges to such surface impoundments unless they meet specified siting and design requirements. Requires compliance with specific investigation, remediation, and reporting requirements.	Surface impoundment.	Cal. Health & Safety Code § 25208 (Toxic Pits Cleanup Act)				Not an ARAR; no discharge to surface impoundments are proposed.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2—Capping, Alternative 3—Removal and off-site disposal</b>							
<b>Upland Areas: Alternative: U1—No Action, Alternative U2—Hot-spot removal, Alternative U3—Limited hot spot removal, Alternative U4—Removal and off-site disposal</b>							
<b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2—Hot spot removal, Alternative W3—Removal and off-site disposal</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>State Water Resources Control Board*</b>							
Landfill capping	Alternatives to construction or prescriptive standards.	Cal. Code Regs. tit. 27 requirements are only applicable for waste discharged after 18 July 1997 unless otherwise noted.	Cal. Code Regs. tit. 27, § 20080 (b) and (c) and 21090		2A 2B		Substantive requirements pertaining to criteria for justifying alternative means of meeting prescriptive standards are relevant and appropriate. The selected alternative will meet the requirements if an alternate design is chosen because it will be as effective as the prescriptive cap.
Monitoring	Persons responsible for discharges at units that were closed, abandoned, or inactive on or before 27 November 1984 may be required to develop and implement a monitoring program in accordance with subdiv. 1, subch. 3, art. 1, (Cal. Code Regs. tit 27, § 20380–20435).	Closed, inactive, or abandoned waste management unit before 27 November 1984.	Cal. Code Regs. tit. 27, § 20080(g)				Not an ARAR. The IA H1 landfill operated under interim status until 1989.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			<b>Comments</b>
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	
Disposal of waste	Requires that designated waste as defined at Cal. Water Code § 13173 be discharged to Class I or Class II waste management units.	Discharges of designated waste after 18 July 1997 (nonhazardous waste that could cause degradation of surface or ground waters) to land for treatment, storage, or disposal.	Cal. Code Regs. tit. 27, § 20210	3			Applicable only to off-site alternatives where a waste determination will be required for off-site disposal.
	Requires that nonhazardous solid waste as defined at § 20220(a) be discharged to a classified waste management unit.	Discharge of nonhazardous solid waste after 18 July 1997 to land for treatment, storage, or disposal.	Cal. Code Regs. tit. 27, § 20220(b), (c), and (d)	3			Applicable only to off-site alternatives where a waste determination will be required for off-site disposal.
Disposal of waste (continued)	Inert waste as defined at Cal. Code Regs. tit. 27 § 20230(a) need not be discharged at a classified unit.	Applies to discharges of inert waste to land after 18 July 1997 for treatment, storage, or disposal.	Cal. Code Regs. tit. 27, § 20230(b)	3			Applicable only to off-site alternatives where a waste determination will be required for off-site disposal.
Landfill capping	General construction criteria and general criteria for containment structures.	Waste discharged after 18 July 1997.	Cal. Code Regs. tit. 27, § 20310 and 20320				Not an ARAR. The landfill did not expand or reconstruct units initiated after November 1984.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Closure of a waste management unit	General closure and postclosure maintenance standards	Waste discharged after 18 July 1997.	Cal. Code Regs. tit. 27, § 20950(a), (d), and (e)		2A 2B 3		Potentially relevant and appropriate for closing the Facility Landfill. Evaluation of the substantive provisions for the Facility Landfill requirements should be done for the selected remedy.
Landfill closure	Classified waste management units shall be closed in accordance with an approved closure and postclosure maintenance plan, which provides for continued compliance with the applicable standards for waste containment and precipitation and drainage controls and monitoring requirements.	Waste discharged after 18 July 1997.	Cal. Code Regs. tit. 27, § 21769		2A 2B 3		No wastes were landfilled after 1989; however, further evaluation is required to identify substantive provisions that may be ARARs or relevant and appropriate for the site. Preparation of closure and postclosure maintenance plans are procedural requirements. The design documents for the remedial response will document how the substantive requirements will be met. The Interim Status RCRA-regulated facility will be covered under the Federal requirements; however, the Facility Landfill would be covered under this requirement.
Monitoring	Requires detection monitoring. Once a significant release has occurred, evaluation or corrective action monitoring is required.	Discharge of waste to land after 18 July 1997.	Cal. Code Regs. tit. 27, § 20385(a)(1) and (a)(2)				Not an ARAR. Equivalent federal requirements at Cal. Code Regs. tit. 22, § 66265.91 are determined to be ARARs.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Groundwater cleanup	Requires identification of the point of compliance, hydraulically downgradient from the area where waste was discharged to land.	Discharge of waste to land after 18 July 1997.	Cal. Code Regs. tit. 27, § 20405				Not an ARAR for RCRA landfill. If Cal. Code Regs. tit. 22, § 66264.95 is an ARAR because Cal. Code Regs. tit. 27, § 20405 is not more stringent. No Waste discharged to non-landfill areas after 18, July 1997.
Monitoring	Requires monitoring for compliance with remedial action objectives for 3 years from the date of achieving cleanup levels.	Discharge of waste to land after 18 July 1997.	Cal. Code Regs. tit. 27, § 20410				Not an ARAR for RCRA landfill If federal requirements of Cal. Code Regs. tit. 22, § 66254.96 have been identified because Cal. Code Regs. tit. 27, § 20410 is not more stringent. No Waste discharged to non-landfill areas after 18, July 1997.
	Requires general soil, surface water, and groundwater monitoring.	Discharge of waste to land after 18 July 1997.	Cal. Code Regs. tit. 27, § 20415				Not an ARAR for RCRA landfill. If the federal requirements at Cal. Code Regs. tit. 22, § 66264.97 are identified as ARARs, Cal. Code Regs. tit. 27, § 20415 requirements are not ARARs because they are not more stringent. No Waste discharged to non-landfill areas after 18, July 1997.
Groundwater monitoring	Provides minimum requirements for a groundwater detection monitoring program.	Discharge of waste to land after 18 July 1997.	Cal. Code Regs. tit. 27, § 20420				Not an ARAR for RCRA landfill Essentially the same as federal requirement at Cal. Code Regs. tit. 22, § 66264.98 and state requirement at Cal. Code Regs. tit. 23, § 2550.8. Not an ARAR if federal requirements at Cal. Code Regs. tit. 22, § 66264.98 are ARARs. No Waste discharged to non-landfill areas after 18, July 1997.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
	Requires evaluation monitoring once a significant release is detected.	Discharge of waste to land after 18 July 1997.	Cal. Code Regs. tit. 27, § 20425				Not an ARAR for RCRA landfill Essentially the same as Cal. Code Regs. tit. 22, § 66264.99 and Cal. Code Regs. tit. 23, § 2550.9. Not ARARs if federal requirements at Cal. Code Regs. tit. 22, § 66264.99 are determined to be ARARs. No Waste discharged to non-landfill areas after 18, July 1997.
Corrective action	Requires implementation of corrective action measures that ensure that cleanup levels are achieved throughout the zone affected by the release by removing the waste constituents or treating them in place. Source control may be required. Also requires monitoring to determine the effectiveness of the corrective actions.	Discharge of waste to land after 18 July 1997.	Cal. Code Regs. tit. 27, § 20430		2A 2B 3		Not an ARAR for the RCRA-regulated unit. Essentially the same as Cal. Code Regs. tit. 22, § 66265.100 and Cal. Code Regs. tit. 23, § 2550.10. Federal requirements at Cal. Code Regs. tit. 22, § 66264.100 are ARARs are ARARs for the Interim Status Facility.  No wastes were landfilled after 1989; however, further evaluation is required to identify substantive provisions that may be relevant and appropriate for the site. Design documents for the remedial response will document how the substantive requirements will be met. The Interim Status facility will be covered under the federal requirements, however, the Facility Landfill would be covered under this requirement.



**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Clean closure	When the discharger has successfully completed clean closure, the landfill shall no longer be subject to the SWRCB-promulgated requirements of this title; otherwise, the discharger shall close the landfill and carry out postclosure maintenance as though the discharger had not attempted clean closure. For the purpose of this paragraph, the discharger shall have successfully clean-closed a landfill only if all waste materials, contaminated components of the containment system, and affected geologic materials—including soils and rock beneath and surrounding the unit and groundwater polluted by a release from the unit—are either removed and discharged to an appropriate unit or treated to the extent that they no longer pose a threat to water quality; and all remaining containment features are inspected for contamination and, if contaminated, discharged in accordance with para. (f)(1).		Cal. Code Regs. tit. 27, § 21090(f)	3			Potential ARAR if the full removal alternative is chosen. Applicable to the Facility Landfill. Potentially relevant and appropriate for the Interim Status units.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			<b>Comments</b>
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	
Monitoring	Detection monitoring program may be required at CAI sites before the effective date of these requirements.	CAI site before 27 November 1984.	Cal. Code Regs. tit. 23, § 2510(g)				Not an ARAR. The landfill was active until 1989.
Detection monitoring	Detection monitoring program.	Cal. Code Regs. tit. 23 requirements are only applicable to waste discharges to land after 27 November 1984.	Cal. Code Regs. tit. 23, § 2550.8				Not an ARAR. Essentially the same as federal requirements at Cal. Code Regs. tit. 22, § 662645.98 and state requirements at Cal. Code Regs. tit. 27, § 20420. Not an ARAR if Cal. Code Regs. tit. 22, § 66264.98 is identified as a federal ARAR because it is not more stringent. The requirements for the Interim Status Facility which is located over the Facility Landfill, are more strict. No Waste discharged to non-landfill areas after 18, July 1997
Evaluation monitoring	Evaluation monitoring program.	Cal. Code Regs. tit. 23 requirements are only applicable to waste discharges to land after 27 November 1984.	Cal. Code Regs. tit. 23, § 2550.9				Not an ARAR. Essentially the same as federal requirements at Cal. Code Regs. tit. 22, § 66265.99 and state requirements at Cal. Code Regs. tit. 27, § 20425. Not an ARAR if Cal. Code Regs. tit. 22, § 66264.99 is identified as a federal ARAR because Cal. Code Regs. tit. 23, § 2550.9 is not more stringent. The requirements for the Interim Status Facility which is located over the Facility Landfill, are more strict. No Waste discharged to non-landfill areas after 18, July 1997

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Monitoring	Corrective action monitoring.	Cal. Code Regs. tit. 23 requirements are only applicable to waste discharges to land after 27 November 1984.	Cal. Code Regs. tit. 23, § 2550.10				Not an ARAR, Essentially the same as federal RCRA requirements at Cal. Code Regs. tit. 22, § 66264.100 and state requirements at Cal. Code Regs. tit. 27, § 20430. Not an ARAR if Cal. Code Regs. tit. 22, § 66264.100 is identified as a federal ARAR. The requirements for the Interim Status Facility which is located over the Facility Landfill, are more strict. No Waste discharged to non-landfill areas after 18, July 1997.
Groundwater cleanup	Point of compliance.	Cal. Code Regs. tit. 23 requirements are only applicable to waste discharges to land after 27 November 1984.	Cal. Code Regs. tit. 23, § 2550.5				Not an ARAR. Essentially the same as Cal. Code Regs. tit. 22, § 66264.95 and Cal. Code Regs. tit. 27, § 20405. Not an ARAR if Cal. Code Regs. tit. 22, § 66264.95 is identified as a federal ARAR because Cal. Code Regs. tit. 23, § 2550.5 is not more stringent. No Waste discharged to non-landfill areas after 18, July 1997.
<b>Cal/EPA Department of Toxic Substances Control*</b>							
CAMU	Media impacted by RCRA hazardous waste must be considered for corrective action regardless of the date of original impact.	Consolidated hazardous waste.	Cal. Code Regs. tit. 22, § 66264.101(a)				Not an ARAR No CAMU is proposed at this site.

**Table X4-2(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
CAMU (continued)	Corrective action, where appropriate, must be performed not only at the facility, but also beyond the facility boundary.	Consolidated hazardous waste.	Cal. Code Regs. tit. 22, § 66264.101(c)				Not an ARAR. No CAMU is proposed at this site.
Disposal of non-RCRA waste	Land disposal restrictions for non-RCRA, California-regulated hazardous waste.	Non-RCRA, California-regulated hazardous waste disposal.	Cal. Code Regs. tit. 22, § 66268.105				Not an ARAR; refers to specific wastes not applicable to this site.
<b>California Civil Code*</b>							
Land-use controls	Provides conditions under which land-use restrictions will apply to successive owners of land.	Transfer property from the DON to a nonfederal agency.	Cal. Civ. Code § 1471		All		DON is not scheduled to transfer IA H1 to another party. Potential ARAR where the DON is transferring property to a nonfederal agency. Substantive provisions are the following general narrative standard: “to do or refrain from doing some act on his or her own land where (c) Each such act relates to the use of land and each such act is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence of hazardous materials, as defined in Section 25260 of the California Health and Safety Code.” This narrative standard would be implemented through incorporation of restrictive covenants in the deed at the time of transfer.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

The State has not yet responded to our request for ARARs

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>California Health and Safety Code*</b>							
Stockpiling	Stockpiled at the site for up to 90 days without satisfying all substantive requirements of a hazardous waste facility storage permit provided certain conditions are met with regard to storage, inspections, and management. These conditions include: the waste is non-RCRA contaminated soil; the hazardous waste being accumulated does not contain free liquids; the hazardous waste is accumulated on an impermeable surface, such as high-density polyethylene, of at least 20 mils that is supported by a foundation, or high-density polyethylene of at least 60 mils that is not supported by a foundation; the generator provides controls for windblown dispersion and precipitation runoff and run-on and complies with any stormwater permit requirements issued by an RWQCB; the generator has the accumulation site inspected weekly and after storms to assure that the controls for windblown dispersion and precipitation runoff and run-on are functioning properly; the	Non-RCRA hazardous waste intended for on-site treatment and disposal.	Cal. Health & Safety Code § 25123.3				Not an ARAR; stockpiling of non-RCRA hazardous waste is not proposed in any alternative.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

The State has not yet responded to our request for ARARs

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Stockpiling (continued)	generator, after final off-site transportation, inspects the accumulation site for contamination and remediates as necessary; the site is certified by a registered engineer for compliance with the standards specified herein.						
Land-use controls	Allows DTSC to enter into an agreement with the owner of a hazardous waste facility to restrict present and future land uses.	Transfer property from the DON to a nonfederal agency.	Cal. Health & Safety Code § 25202.5		All		Potential ARAR for future transfers. The substantive provisions of Cal. Health & Safety Code § 25202.5 are the general narrative standards to restrict “present and future uses of all or part of the land on which the facility is located.”
	Provides a streamlined process to be used to enter into an agreement to restrict specific use of property in order to implement the substantive use restrictions of Cal. Health & Safety Code § 25232(b)(1)(A)–(E).	Transfer property from the DON to a nonfederal agency.	Cal. Health & Safety Code § 25222.1		All		Potential ARAR for future transfers. Cal. Health & Safety Code § 25222.1 provides the authority for the state to enter into voluntary agreements to establish land-use covenants with the owner of the property. The substantive provision of Cal. Health & Safety Code § 25222.1 is the general narrative standard: “restricting specified uses of the property.”

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

The State has not yet responded to our request for ARARs

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Land-use controls (continued)	Prohibits certain uses of land containing hazardous waste without a specific variance.	Hazardous waste property.	Cal. Health & Safety Code § 25232(b)(1)(A)–(E)		All		Potential ARAR for property containing hazardous waste. Land-use restrictions will be used to prohibit the following activities at IA H1 residential use of the sites; construction any permanently occupied human habitation; on the digging and or harming the cap (if the capping alternative is chosen)
	Provides a process for obtaining a written variance from a land-use restriction.	Transfer property from the DON to a nonfederal agency.	Cal. Health & Safety Code § 25233(c)			All	Potential ARAR for institutional controls where the DON possible future transfers of property to a nonfederal agency. Cal. Health & Safety Code § 25233(c) sets forth substantive criteria for granting variances from the uses prohibited in subpara. 25232(b)(1) (A)–(E) based on specified environmental and health criteria.
Air emissions	No person shall discharge from any source whatsoever such quantities of air contaminants or other material that causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endangers the comfort, repose, health, or safety of any such persons or the public, or that causes, or has a natural tendency to cause, injury or damage to business or property.	Air emissions.	Cal. Health & Safety Code § 41700				Not an ARAR.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

*The State has not yet responded to our request for ARARs*

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
	No person shall discharge into the atmosphere from any source whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than 3 minutes in any 1 hour that is as dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke.	Air emissions.	Cal. Health & Safety Code § 41701				Implemented through local BAAQMD.
Waste disposal	Wastes that contain total lead in excess of 350 ppm, copper in excess of 2,500 ppm, or nickel in excess of 200 ppm must be disposed in a Class I landfill.	Waste containing total lead, copper, or nickel in excess of specified levels.	Cal. Health & Safety Code § 25157.8	3			Potentially applicable for off-site disposal alternatives. Characterization would occur when materials are generated for disposal.
<b>California Fish and Game Code</b>							
Actions involving wildlife	Designation of the Department of Fish and Game as trustee for State Fish and Wildlife Resources.		Cal. Fish & Game Code § 711.7				Not an ARAR. Not a "cleanup standard, standard of control," or "other substantive requirement, criteria, or limitation."
Taking of plants or animals	Permits to take or possess plant or animal life for scientific, educational, or propagation purposes.		Cal. Fish & Game Code § 1000, 1001, and 1002				Not an ARAR. Not a "cleanup standard, standard of control," or "other substantive requirement, criteria, or limitation."



**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

The State has not yet responded to our request for ARARs

<b>Containment Area Alternative: 1—No action, Alternative 2—Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2—Hot-spot removal, Alternative U3—Limited hot spot removal, Alternative U4—Removal and off-site disposal</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2—Hot spot removal, Alternative W3—Removal and off-site disposal</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Species conservation and enhancement	Conservation objectives and policy.		Cal. Fish & Game Code § 1600, 1700, 1750, 1801, and 2014; Cal. Water Code § 1243				Not ARARs. Not a “cleanup standard, standard of control,” or “other substantive requirement, criteria, or limitation.”
Actions affecting wildlife resource	Requires streambed alterations to not substantially adversely affect an existing fish or wildlife resource.	Waters of the state.	Cal. Fish & Game Code § 1601				Not an ARAR because it is not a requirement of general applicability (i.e., it only applies to state and local government and utilities).
Actions affecting wildlife resource	Requires streambed alterations to not substantially adversely affect an existing fish or wildlife resource.	Waters of the state.	Cal. Fish & Game Code § 1603				Not an ARAR. No streambed alterations are proposed.
Actions impacting endangered species	Projects within the state shall not jeopardize the existence of any endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with preserving the species or its habitat that would prevent jeopardy.	Endangered or threatened species.	Cal. Fish & Game Code § 1900, 1908, 2053, and 2080	2A 2B 3 W2 W3 W4 W5			IA H1 provides habitat and supports the Salt Marsh Harvest Mouse. Remedial actions to be taken will be mitigated and are not expected to have any long-term impacts on threatened or endangered species. The mitigation will result in increased quantity and quality of habitat.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

The State has not yet responded to our request for ARARs

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b> <b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b> <b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
Actions impacting birds or mammals	Prohibits the taking of birds and mammals, including the taking by poison.	Birds and mammals.	Cal. Fish & Game Code § 3005(a)				Procedural aspects are not ARARs; certain substantive provisions pertaining to take of birds or mammals with a poisonous substance are applicable. The selected remedy will prevent “take” of birds and mammals by containing contaminants and severing the pathway of exposure to contaminated soil or removing contaminants below harmful levels.
Discharge to waters of the state	Prohibits the passage of enumerated substances or materials into waters of the state deleterious to fish, plant life, or birds.		Cal. Fish & Game Code § 5650(a) and (f); 5651	2A 2B, 3 U2 U3 U4 U5 W2 W3 W4 W5			Substantive provisions may be ARARs for response actions where the potential exists for contaminants to pass into water.

**Table A-6(continued)  
Potential State Action-Specific ARARs**

The State has not yet responded to our request for ARARs

<b>Containment Area Alternative: 1—No action, Alternative 2A-2B Capping, Alternative 3—Removal and off-site disposal</b>							
<b>Upland Areas: Alternative: U1—No Action, Alternative U2,,3,4—Hot-spot removal HQ10,5,3, Alternative U5—Debris removal and on-site containment</b>							
<b>Non-Tidal Wetland Areas: Alternative W1—No action, Alternative W2,3,4,5—Hot spot removal for HQ of 10,5,3,1</b>							
				<b>ARAR Determination</b>			
<b>Action</b>	<b>Requirement</b>	<b>Prerequisite</b>	<b>Citation</b>	<b>A</b>	<b>RA</b>	<b>TBC</b>	<b>Comments</b>
<b>Air Quality Management District/Air Pollution Control District*</b>							
Air emission	Shall not cause or allow the emissions of fugitive dust such that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source and shall not cause or allow PM <sub>10</sub> levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples.		BAAQMD Rule 6	2A 2B, 3 U2 U3 U4 U5 W2 W3 W4 W5			Fugitive dust can be generated from any grading and earth-moving activities including placement of various cover layers and consolidation of wastes. Substantive requirements pertaining to fugitive dust emission control will be applicable.

Note:

- \* Statutes and policies, and their citations, are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the DON accepts the entire statutes or policies as potential ARARs; specific potential ARARs are addressed in the table below each general heading; only substantive requirements of the specific actions are considered potential ARARs.

**Table A-6(continued)**  
**Potential State Action-Specific ARARs**

**The State has not yet responded to our request for ARARs**

**Acronyms/Abbreviations:**

A – applicable	NAWQC – National Ambient Water Quality Control
APCD – Air Pollution Control District	PM <sub>10</sub> – particulate matter, less than 10 micrometers in diameter
AQMD – Air Quality Management District	ppm – parts per million
ARAR – applicable or relevant and appropriate requirement	Prop. – proposition
BAT – best available technology	RA – relevant and appropriate
BPT – best practicable treatment	RAO – removal action objective
CAI – closed, abandoned, or inactive	RCRA – Resource Conservation and Recovery Act
Cal. Code Regs. – <i>California Code of Regulations</i>	Res. – resolution
Cal/EPA – California Environmental Protection Agency	RI – remedial investigation
Cal. Fish & Game Code – <i>California Fish and Game Code</i>	RWQCB – Regional Water Quality Control Board [San Francisco Bay Region]
Cal. Health & Safety Code – <i>California Health and Safety Code</i>	§ – section
Cal. Pub. Res. Code – <i>California Public Resources Code</i>	SCAQMD – South Coast Air Quality Management District
Cal. Water Code – <i>California Water Code</i>	SIP – State Implementation Plan
CAMU – corrective action management unit	SWAT – Solid Waste Assessment Test
CEQA – California Environmental Quality Act	SWRCB – (California) State Water Resources Control Board
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act	T-BACT – best available control technology for toxics
C.F.R. – <i>Code of Federal Regulations</i>	TBC – to be considered
ch. – chapter	tit. – title
CWA – Clean Water Act	TPH – total petroleum hydrocarbons
div. – division	U.S.C. – <i>United States Code</i>
DON – Department of the Navy	UST – underground storage tank
DTSC – (Cal/EPA) Department of Toxic Substances Control	VOC – volatile organic compound
EE/CA – engineering evaluation/cost analysis	WQO – water quality objective
FS – feasibility study	
LDR – land disposal restriction	
mg/L – milligrams per liter	